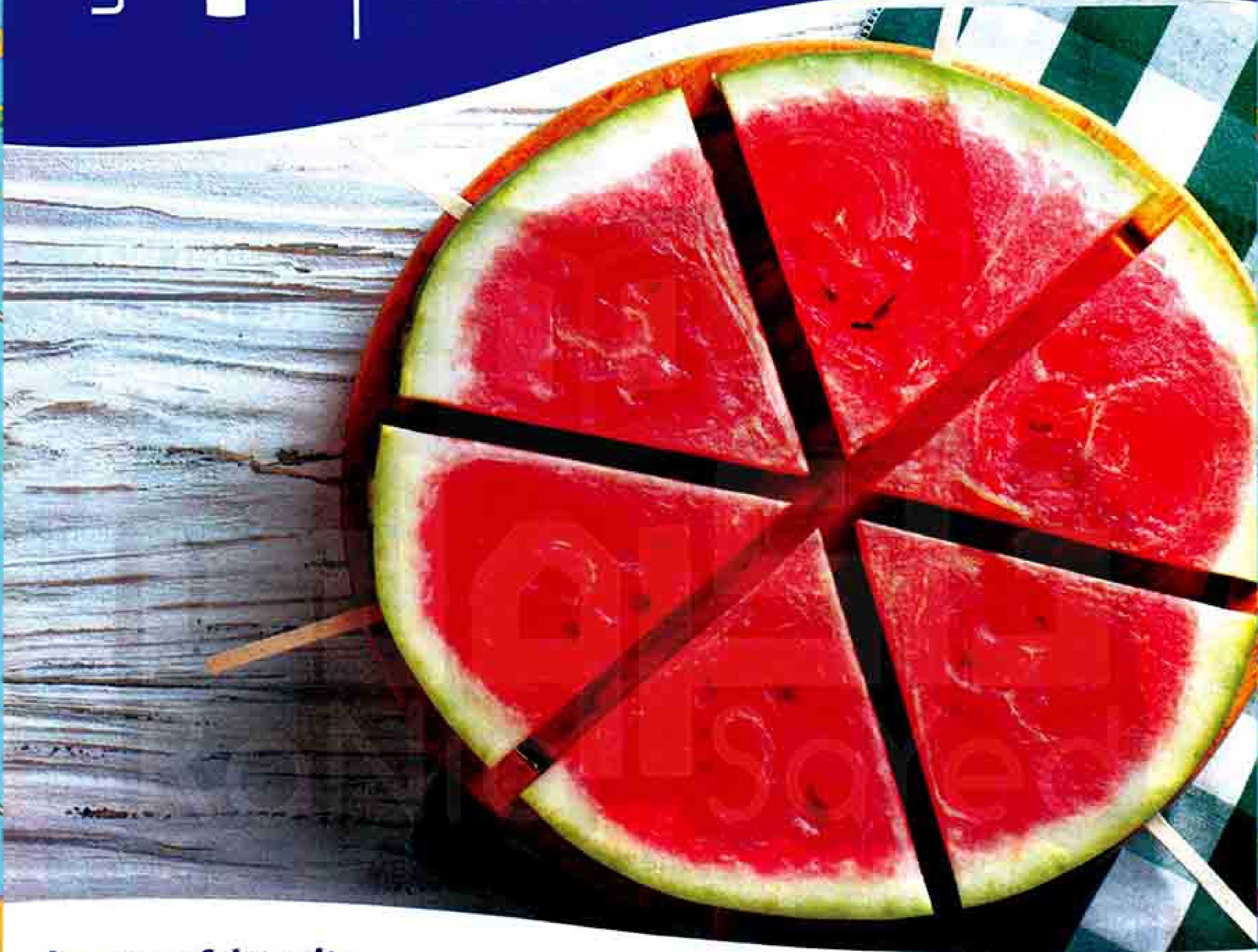
UNIT 1 Fractions and decimal numbers



Lessons of the unit :

1. Reviewing what was studied about fractions.
2. Fractions.
3. Adding and subtracting the fractions have different denominators.
4. Decimal numbers.
5. More about decimal numbers.
6. Comparing two decimal numbers and ordering a set of decimal numbers.
7. Operations on decimal numbers.

8 A. Approximating to the nearest ten.

8 B. Approximating to the nearest hundred or the nearest thousand.

8 C. Approximating to the nearest ten thousand or the nearest hundred thousand.

8 D. Approximating to the nearest unit.

8 D. Approximating to the nearest tenth.

⊙ Activities.

⊙ General exercise.

Lesson 1

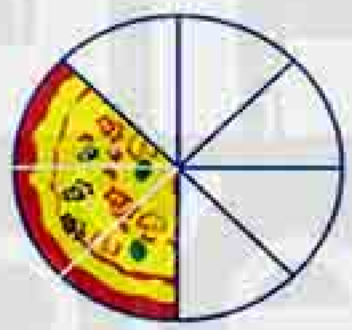
Reviewing what was studied about fractions

Fractions

- Fractions are a way to represent parts of a whole.
- The pizza can be cut into any number of slices. Each slice is a part, or a fraction of the whole pizza.

$\frac{1}{2}$ (One half)

$\frac{1}{4}$ (One quarter)



$\frac{3}{8}$ (Three eighths)

Numerator & Denominator

In each fraction :

- We call the top number the **Numerator**, it is the number of parts you have.
- We call the bottom number the **Denominator**, it is the number of parts the whole is divided into.

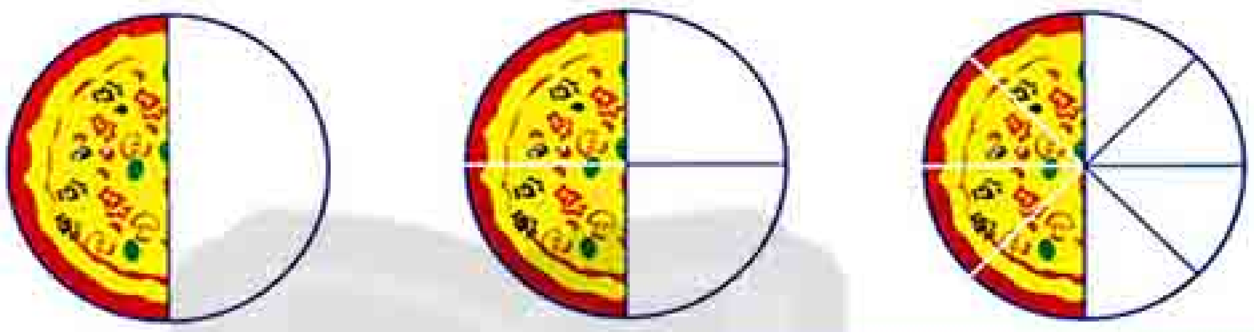
3 ⟶	**Numerator**
8 ⟶	**Denominator**

Equivalent fractions

- Some fractions may look different, but are really the same.

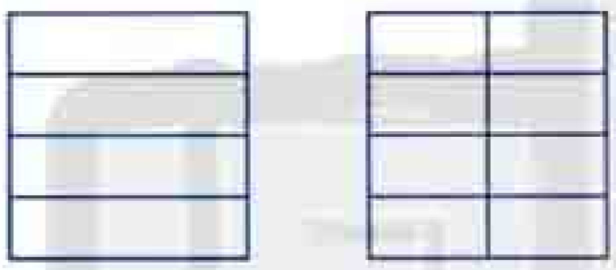
For Example

$\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$

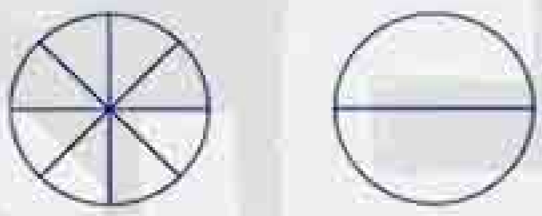


- To find equivalent fractions , multiply or divide both of the numerator and the denominator by the same number (other than zero).

For Example



$\frac{2}{4} \xrightarrow{\times 2} \frac{4}{8}$, so $\frac{2}{4} = \frac{4}{8}$



$\frac{4}{8} \xrightarrow{\div 4} \frac{1}{2}$, so $\frac{4}{8} = \frac{1}{2}$

Important

You only multiply or divide, never add or subtract, to get an equivalent fraction.

Simplifying the fractions

To reduce (simplify) a fraction to its simplest form, we divide each of the numerator and the denominator by the greatest possible common number.

For Example

$\frac{4}{12} \xrightarrow{\div 4} \frac{1}{3}$, so $\frac{4}{12} = \frac{1}{3}$

$\frac{14}{21} \xrightarrow{\div 7} \frac{2}{3}$, so $\frac{14}{21} = \frac{2}{3}$

Lesson 1

Comparing two fractions of the same denominator

If the two fractions have the same denominator, then the fraction with the greater numerator is greater than the other fraction.

For Example

- $\frac{6}{7} > \frac{5}{7}$ (because $6 > 5$)
- $\frac{2}{3} < \frac{5}{6}$ (because $\frac{2}{3} = \frac{4}{6}$ and $\frac{4}{6} < \frac{5}{6}$ as $4 < 5$)

Comparing two fractions of the same numerator

If the two fractions have the same numerator, then the fraction with the smaller denominator is greater than the other fraction.

For Example

- $\frac{4}{5} > \frac{4}{7}$ (because $5 < 7$)
- $\frac{5}{8} < \frac{5}{6}$ (because $8 > 6$)

Adding two fractions of the same denominator

When you are adding some fractions of the same denominator, add the numerators and use the same denominator.

For Example

- $\frac{3}{10} + \frac{4}{10} = \frac{7}{10}$
- $1 + \frac{1}{3} = \frac{3}{3} + \frac{1}{3} = \frac{4}{3}$

Notice that :

$1 = \frac{2}{2} = \frac{3}{3} = \frac{4}{4} = \cdots$ etc.

Subtracting two fractions of the same denominator

When you are subtracting two fractions of the same denominator, subtract the numerators and use the same denominator.

For Example

- $\frac{6}{7} - \frac{2}{7} = \frac{4}{7}$
- $1 - \frac{1}{4} = \frac{4}{4} - \frac{1}{4} = \frac{3}{4}$

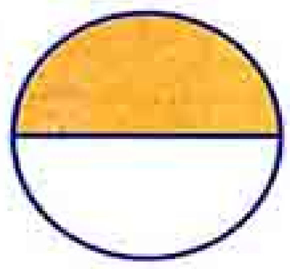
Exercise 1

Reviewing what was studied about fractions

From the school book

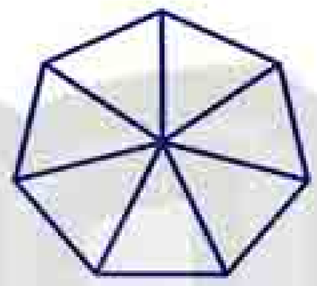
1 Write the fraction that represents the coloured part according to the whole figure as in the example :

Example



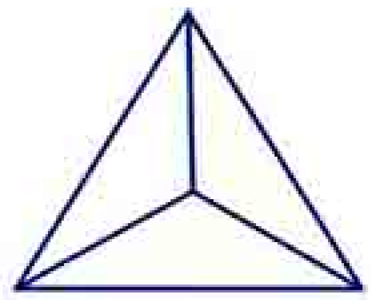
$\frac{1}{2}$

a



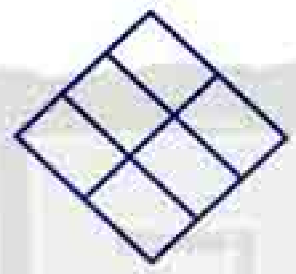
$\frac{......}{......}$

b



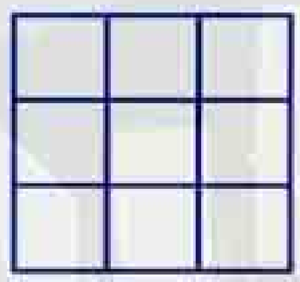
$\frac{......}{......}$

c



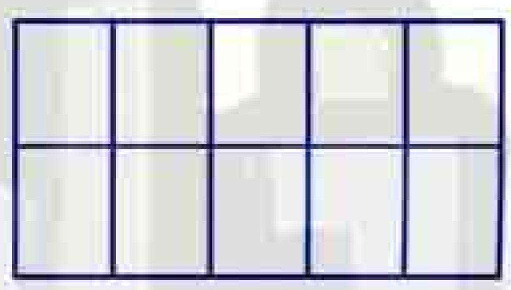
$\frac{......}{......}$

d



$\frac{......}{......}$

e

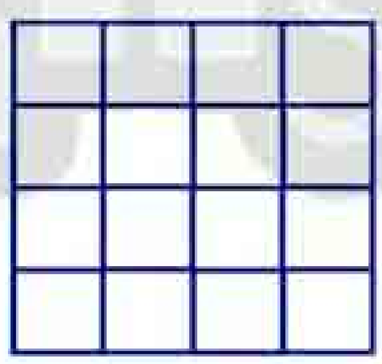


$\frac{......}{......}$

f

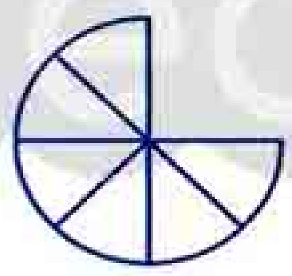
$\frac{......}{......}$

g



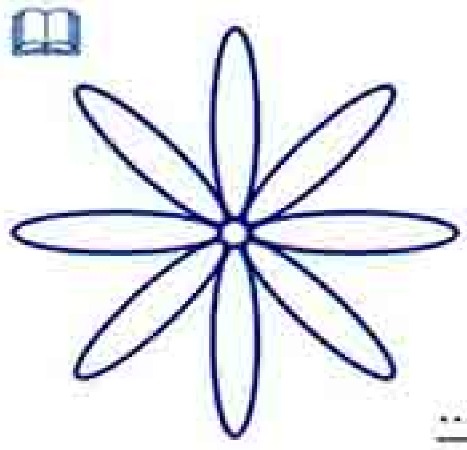
$\frac{......}{......}$

h



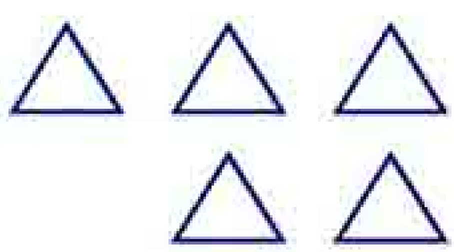
$\frac{......}{......}$

i



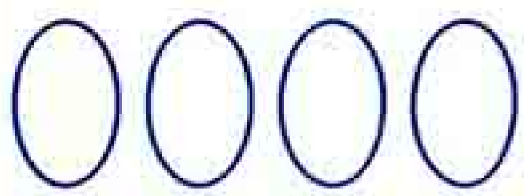
$\frac{......}{......}$

j



$\frac{......}{......}$

k

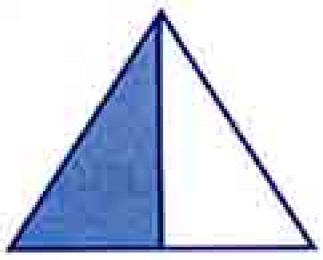


$\frac{......}{......}$

Lesson 1

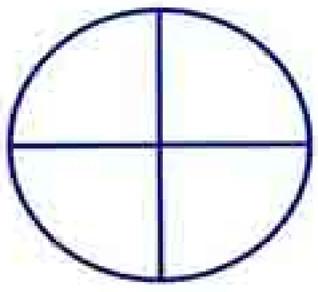
2 Colour according to the fraction as in the example :

Example



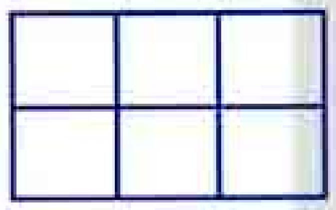
$\frac{1}{2}$

a



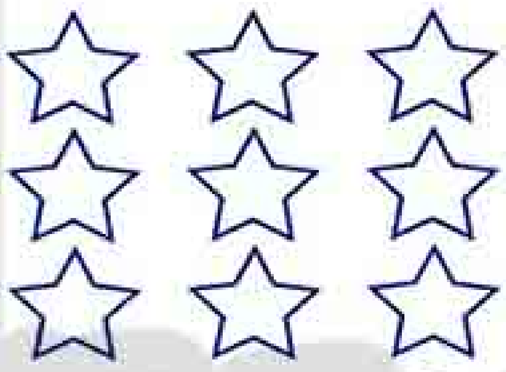
$\frac{1}{4}$

b



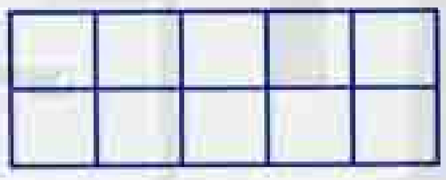
$\frac{5}{6}$

c



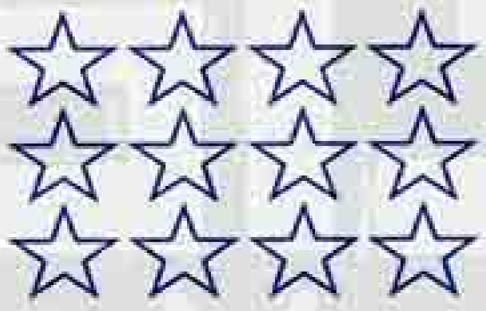
$\frac{5}{9}$

d



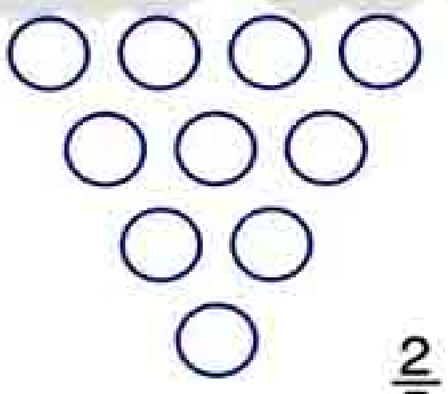
$\frac{1}{2}$

e



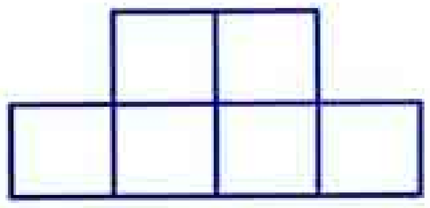
$\frac{1}{4}$

f



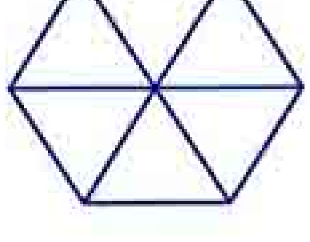
$\frac{2}{5}$

g



$\frac{1}{3}$

h



$\frac{2}{3}$

3 Complete the following table :

What part(s) is (are) blue ?	$\frac{1}{8}$	$\frac{......}{......}$	$\frac{......}{......}$
What part(s) is (are) yellow ?	$\frac{......}{......}$	$\frac{......}{......}$	$\frac{......}{......}$
What parts are pink ?	$\frac{......}{......}$	$\frac{......}{......}$	$\frac{......}{......}$
What parts are pink or blue ?	$\frac{......}{......}$	$\frac{5}{6}$	$\frac{......}{......}$
What parts are not blue ?	$\frac{......}{......}$	$\frac{......}{......}$	$\frac{5}{10}$

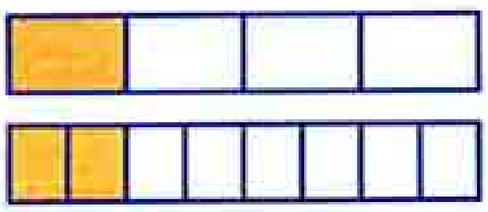
4 Complete the following table as in the example :

	Numerator	Denominator	The fraction is	Read as
Ex	1	4	$\frac{1}{4}$	One fourth
a	2	5	....	....
b	2	3	....	....
c	....	....	$\frac{5}{6}$	....
d	....	....	$\frac{3}{10}$	....
e	....	....	....	Three eighths
f	....	....	....	Two ninths

Lesson 1

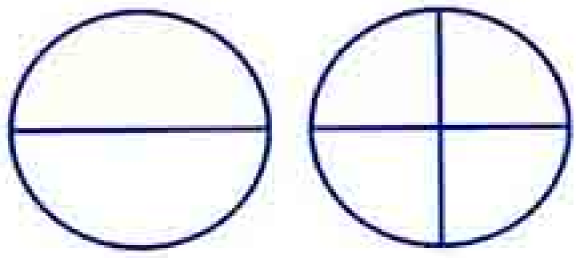
5 Complete as in the following example :

Example



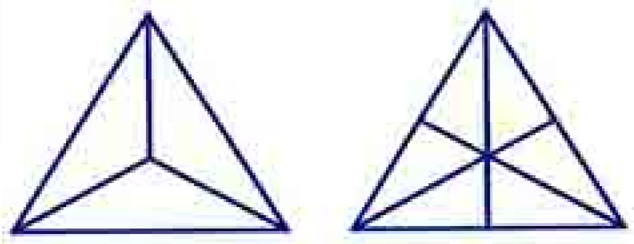
$\frac{1}{4} = \frac{2}{8}$

a



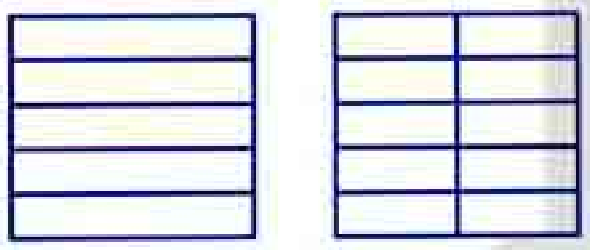
$\frac{1}{2} = \frac{\dots\dots}{4}$

b



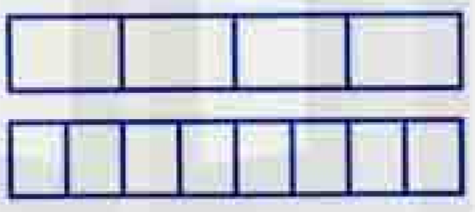
$\frac{2}{3} = \frac{\dots\dots}{6}$

c



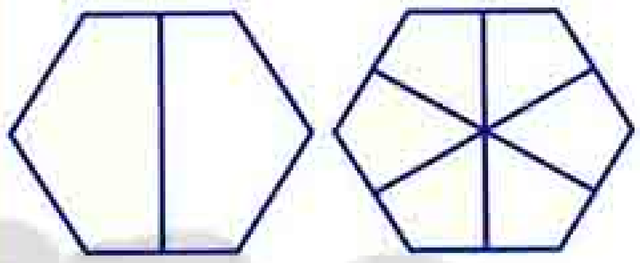
$\frac{3}{5} = \frac{\dots\dots}{10}$

d



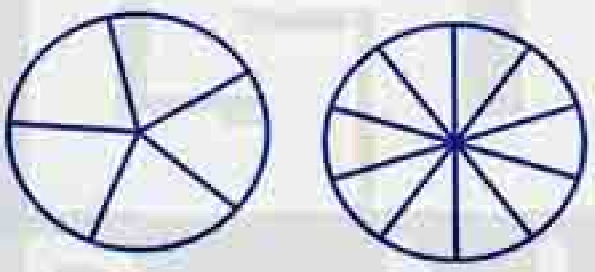
$\frac{2}{4} = \frac{\dots\dots}{8}$

e



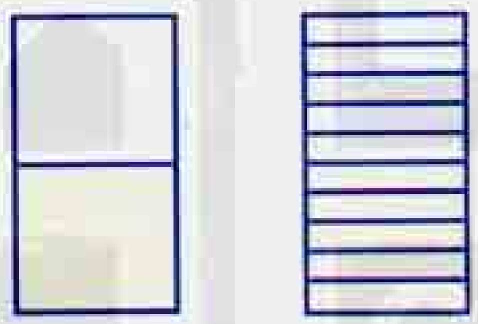
$\frac{1}{2} = \frac{\dots\dots}{6}$

f



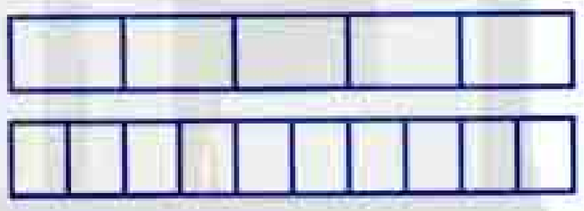
$\frac{1}{5} = \frac{\dots\dots}{10}$

g



$\frac{1}{2} = \frac{\dots\dots}{10}$

h



$\frac{2}{5} = \frac{\dots\dots}{10}$

6 Complete :

a $1 = \frac{3}{\dots\dots} = \frac{\dots\dots}{8} = \frac{10}{\dots\dots} = \frac{5}{\dots\dots}$

b $\frac{1}{2} = \frac{5}{\dots\dots} = \frac{3}{\dots\dots} = \frac{6}{\dots\dots} = \frac{\dots\dots}{20}$

c $\frac{1}{3} = \frac{2}{\dots\dots} = \frac{3}{\dots\dots} = \frac{\dots\dots}{15} = \frac{9}{\dots\dots} = \frac{\dots\dots}{30}$

d $\frac{2}{5} = \frac{4}{\dots\dots} = \frac{6}{\dots\dots} = \frac{\dots\dots}{25} = \frac{18}{\dots\dots} = \frac{\dots\dots}{50}$

e $\frac{3}{4} = \frac{\dots\dots}{8} = \frac{9}{\dots\dots} = \frac{\dots\dots}{20} = \frac{30}{\dots\dots}$

f $\frac{4}{7} = \frac{12}{\dots\dots} = \frac{20}{\dots\dots} = \frac{8}{\dots\dots} = \frac{\dots\dots}{77}$

7 Complete as in the example :

Example

$\frac{35}{7} = \frac{5}{1} = 5$

a $\frac{15}{5} = \frac{\cdots\cdots}{1} = \cdots\cdots$

b 📖 $\frac{30}{10} = \frac{3}{\cdots\cdots} = \cdots\cdots$

c $\frac{50}{10} = \frac{\cdots\cdots}{1} = \cdots\cdots$

d $\frac{6}{2} = \frac{3}{\cdots\cdots} = \cdots\cdots$

e 📖 $\frac{20}{5} = \frac{\cdots\cdots}{1} = \cdots\cdots$

f 📖 $\frac{28}{7} = \frac{\cdots\cdots}{\cdots\cdots} = \cdots\cdots$

g $\frac{30}{5} = \frac{\cdots\cdots}{1} = \cdots\cdots$

h 📖 $\frac{80}{8} = \frac{\cdots\cdots}{\cdots\cdots} = \cdots\cdots$

i $\frac{48}{3} = \frac{\cdots\cdots}{1} = \cdots\cdots$

j $\frac{90}{3} = \frac{\cdots\cdots}{\cdots\cdots} = \cdots\cdots$

k $\frac{54}{\cdots\cdots} = \frac{\cdots\cdots}{1} = 9$

l $\frac{\cdots\cdots}{7} = \frac{\cdots\cdots}{1} = 6$

8 Complete :

a $\frac{1}{2} = \frac{5}{\cdots\cdots}$

b 📖 $\frac{5}{15} = \frac{\cdots\cdots}{3}$

c $\frac{3}{5} = \frac{9}{\cdots\cdots}$

d 📖 $\frac{8}{9} = \frac{48}{\cdots\cdots}$

e $\frac{16}{18} = \frac{\cdots\cdots}{9}$

f 📖 $\frac{5}{7} = \frac{30}{\cdots\cdots}$

g 📖 $\frac{\cdots\cdots}{13} = \frac{4}{26}$

h $\frac{\cdots\cdots}{9} = \frac{32}{72}$

9 Simplify each of the following fractions as in the example :

Example

- $\frac{3}{6} \overset{\xrightarrow{\div 3}}{\underset{\xrightarrow[\div 3]{}}{=}} \frac{1}{2}$
- $\frac{4}{20} \overset{\xrightarrow{\div 4}}{\underset{\xrightarrow[\div 4]{}}{=}} \frac{1}{5}$

a $\frac{5}{10} = \frac{\cdots\cdots}{\cdots\cdots}$

b $\frac{2}{6} = \frac{\cdots\cdots}{\cdots\cdots}$

c 📖 $\frac{6}{12} = \frac{\cdots\cdots}{\cdots\cdots}$

d $\frac{6}{9} = \frac{\cdots\cdots}{\cdots\cdots}$

e 📖 $\frac{5}{20} = \frac{\cdots\cdots}{\cdots\cdots}$

f $\frac{6}{21} = \frac{\cdots\cdots}{\cdots\cdots}$

Lesson 7

g $\frac{10}{35} = \frac{......}{......}$ h 📖 $\frac{7}{21} = \frac{......}{......}$ i 📖 $\frac{15}{27} = \frac{......}{......}$

j $\frac{8}{32} = \frac{......}{......}$ k 📖 $\frac{15}{24} = \frac{......}{......}$ l $\frac{9}{81} = \frac{......}{......}$

m 📖 $\frac{12}{42} =$ .... n 📖 $\frac{40}{45} =$ .... o 📖 $\frac{28}{70} =$ ....

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10 Complete each of the following using (< , > or =) as in the example :

Example

- $\frac{3}{7}$ (>) $\frac{1}{7}$
- $\frac{3}{5}$ (<) $\frac{3}{4}$
- $\frac{2}{5}$ (=) $\frac{4}{10}$

a $\frac{1}{5}$ ◯ $\frac{2}{5}$ b $\frac{3}{6}$ ◯ $\frac{5}{6}$ c $\frac{7}{5}$ ◯ $\frac{7}{8}$

d $\frac{6}{11}$ ◯ $\frac{8}{11}$ e $\frac{1}{3}$ ◯ $\frac{4}{6}$ f $\frac{5}{7}$ ◯ $\frac{15}{21}$

g $\frac{3}{3}$ ◯ $\frac{5}{5}$ h 1 ◯ $\frac{10}{10}$ i 1 ◯ $\frac{5}{9}$

j $\frac{1}{7}$ ◯ $\frac{1}{3}$ k $\frac{8}{25}$ ◯ $\frac{8}{13}$ l $\frac{8}{3}$ ◯ $\frac{8}{5}$

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11 Arrange each of the following in an ascending order as in the example :

Example

- $\frac{1}{7}$, $\frac{5}{7}$, $\frac{3}{7}$, $\frac{4}{7}$ The order is : $\frac{1}{7}$, $\frac{3}{7}$, $\frac{4}{7}$, $\frac{5}{7}$
- $\frac{3}{6}$, $\frac{2}{6}$, $\frac{5}{6}$, $\frac{2}{3}$ The order is : $\frac{2}{6}$, $\frac{3}{6}$, $\frac{2}{3}$, $\frac{5}{6}$

Notice that : $\frac{2}{3} = \frac{4}{6}$

a $\frac{9}{10}$, $\frac{3}{10}$, $\frac{5}{10}$, $\frac{2}{10}$ The order is : .... , ... , ... , ...

b $\frac{5}{9}$, $\frac{3}{9}$, $\frac{1}{9}$, $\frac{6}{9}$ The order is : .... , ... , ... , ...

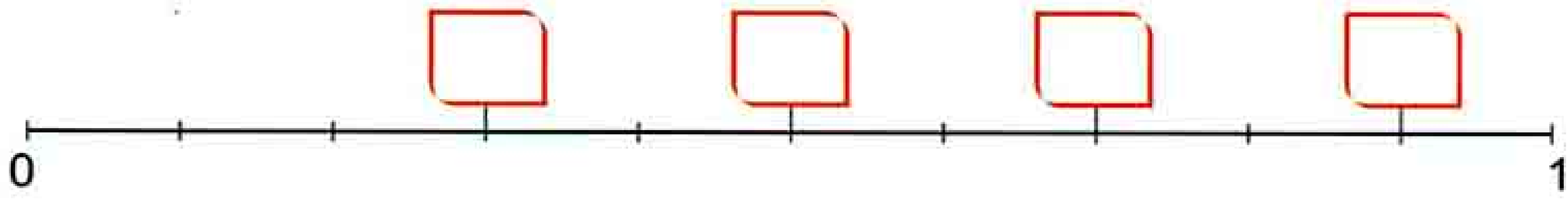
c $\frac{5}{7}$, $\frac{3}{7}$, 1 , $\frac{2}{7}$ The order is : .... , ... , ... , ...

d $\frac{8}{12}$, $\frac{10}{12}$, $\frac{3}{4}$, $\frac{11}{12}$ The order is : .... , ... , ... , ...

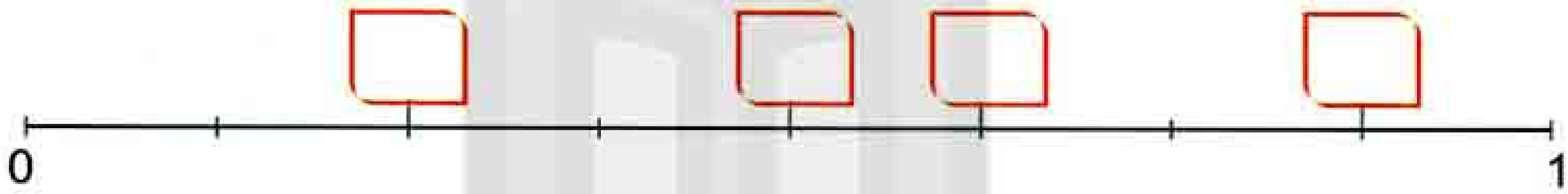
e $\frac{3}{8}$, 1 , $\frac{1}{8}$, $\frac{1}{2}$ The order is : .... , ... , ... , ...

12 Place each of the following fractions in the suitable place :

a $\frac{7}{10}$, $\frac{9}{10}$, $\frac{1}{2}$, $\frac{3}{10}$



b $\frac{5}{8}$, $\frac{7}{8}$, $\frac{1}{2}$, $\frac{1}{4}$



13 Complete as in the example :

Example

• $\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$ • $\frac{5}{9} - \frac{3}{9} = \frac{2}{9}$ • $1 - \frac{1}{7} = \frac{6}{7}$

a $\frac{1}{5} + \frac{2}{5} = \frac{\cdots}{\cdots}$

b $\frac{5}{7} + \frac{1}{7} = \frac{\cdots}{\cdots}$

c $\frac{7}{9} - \frac{5}{9} = \frac{\cdots}{\cdots}$

d $\frac{6}{11} - \frac{3}{11} = \frac{\cdots}{\cdots}$

e $\frac{2}{7} + \cdots = \frac{6}{7}$

f $\frac{2}{5} + \frac{\cdots}{\cdots} = \frac{3}{5}$

g $\frac{4}{7} - \frac{\cdots}{\cdots} = \frac{1}{7}$

h $\frac{3}{4} + \frac{\cdots}{\cdots} = 1$

i $1 - \frac{1}{4} = \frac{\cdots}{\cdots}$

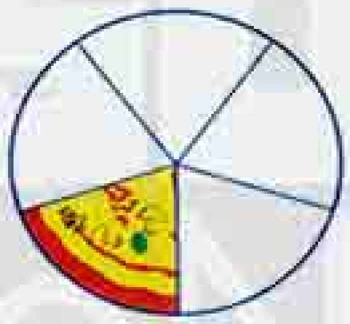
j $1 - \frac{\cdots}{\cdots} = \frac{1}{5}$

Lesson 2

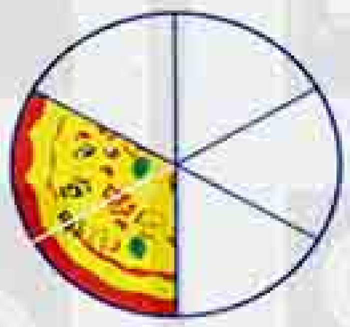
Fractions

Proper fraction

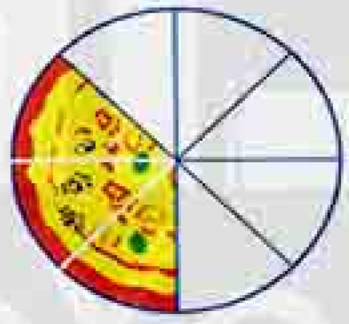
- A proper fraction is just a fraction where its numerator is less than its denominator.
- Here are some examples of proper fractions :



$\frac{1}{5}$



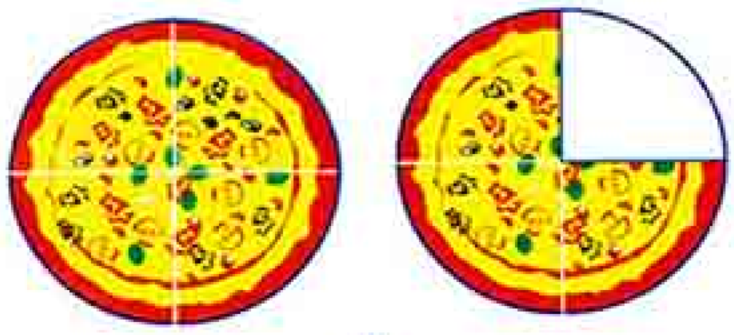
$\frac{2}{6}$



$\frac{3}{8}$

Improper fraction

- An improper fraction is just a fraction where its numerator is greater than or equal to its denominator.
- Here is an example of improper fractions :



$\frac{7}{4}$

Notice that :

$\frac{7}{4}$ means :

- We have 7 parts.
- Each part is a quarter $(\frac{1}{4})$ of a whole.

Remark

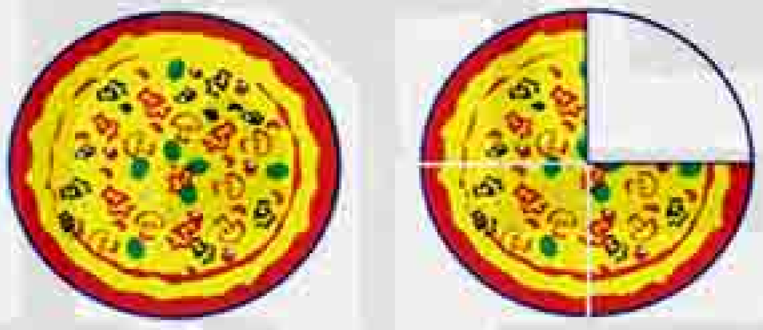
Any whole number not equal to 0 can be written in the form of an improper fraction.

For Example

- $1 = \frac{1}{1} = \frac{2}{2} = \frac{3}{3} = \frac{4}{4} = \cdots$ etc.
- $2 = \frac{2}{1} = \frac{4}{2} = \frac{6}{3} = \frac{8}{4} = \cdots$ etc.
- $5 = \frac{5}{1} = \frac{10}{2} = \frac{15}{3} = \frac{20}{4} = \cdots$ etc.
- $10 = \frac{10}{1} = \frac{20}{2} = \frac{30}{3} = \frac{40}{4} = \cdots$ etc.

Mixed numbers

A mixed number is a number consisting of a whole number and a proper fraction, such as :



Whole number → $1\frac{3}{4}$ ← Proper fraction

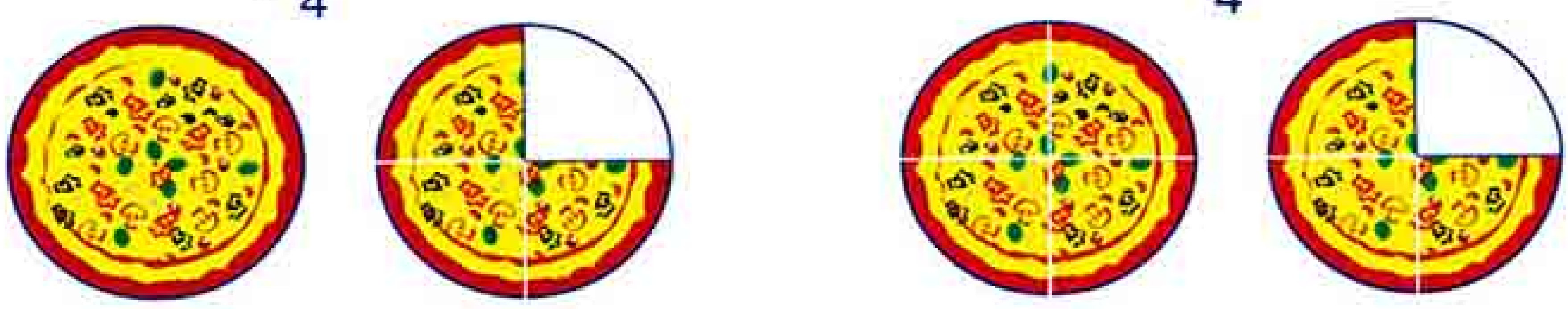
(One and three quarters)

Remark

Any mixed number can be written as an improper fraction and vice versa.

For Example

$1\frac{3}{4} = \frac{7}{4}$



Lesson 2

Converting a mixed number to an improper fraction

The following example shows two methods to convert a mixed number to an improper fraction :

Example 1

Convert the mixed number $4\frac{1}{2}$ to an improper fraction.

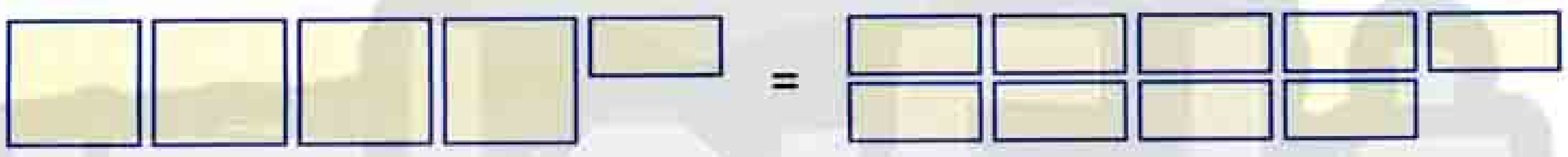
Solution

First method

$$4\frac{1}{2} = 4 + \frac{1}{2} = \frac{8}{2} + \frac{1}{2} = \frac{9}{2}$$

Notice that :

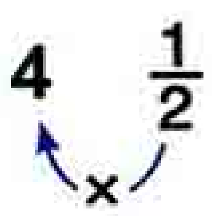
$$4 = \frac{4}{1} = \frac{4 \times 2}{1 \times 2} = \frac{8}{2}$$



Second method

Step 1

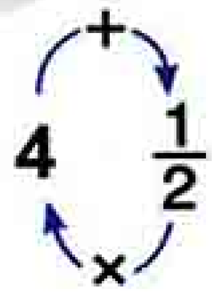
Multiply the denominator **2** by the whole number **4**



$4 \times 2 = 8$

Step 2

Add the result to the numerator **1**



$8 + 1 = 9$

Step 3

Write the result on top of the denominator, then :

$$4\frac{1}{2} = \frac{9}{2}$$

Converting an improper fraction to a mixed number

The following example shows two methods to convert an improper fraction to a mixed number :

Example 2

Convert the improper fraction $\frac{46}{7}$ to a mixed number.

Solution

First method

$$\frac{46}{7} = \frac{42}{7} + \frac{4}{7} = 6 + \frac{4}{7} = 6\frac{4}{7}$$

Second method

Step 1

Divide the numerator 46 by the denominator 7

$$\begin{array}{r|l} & 6 \leftarrow \text{Quotient} \\ 7 & 46 \\ & -42 \\ \hline & 4 \leftarrow \text{Remainder} \end{array}$$

Step 2

Put the quotient 6 as the whole number.

$$\frac{46}{7} = 6\frac{?}{?}$$

Step 3

Put the remainder 4 over the denominator 7

$$\frac{46}{7} = 6\frac{4}{7}$$

Remark

You should simplify the improper fraction at first , then convert it to the mixed number to be your result in the simplest form.

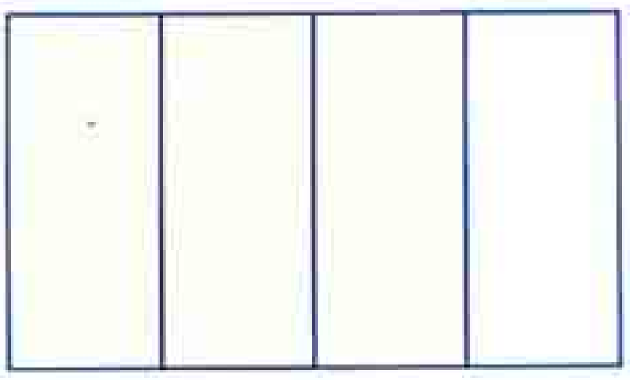
For Example

To convert $\frac{48}{20}$ to a mixed number :

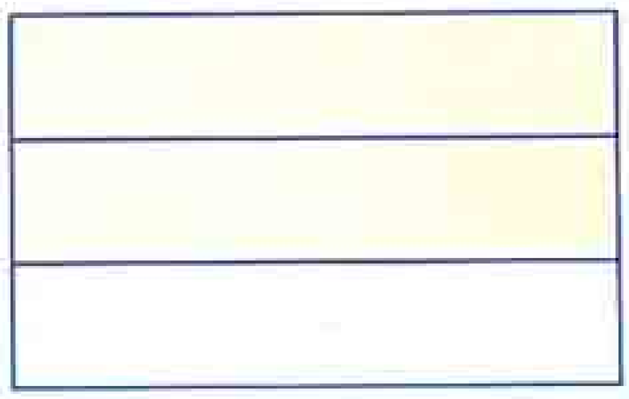
- Simplify $\frac{48}{20}$ as follows : $\frac{48}{20} = \frac{48 \div 4}{20 \div 4} = \frac{12}{5}$
- Convert $\frac{12}{5}$ to a mixed number as we studied before : $\frac{12}{5} = 2\frac{2}{5}$

Lesson 2

Comparing any two fractions of different numerators and denominators



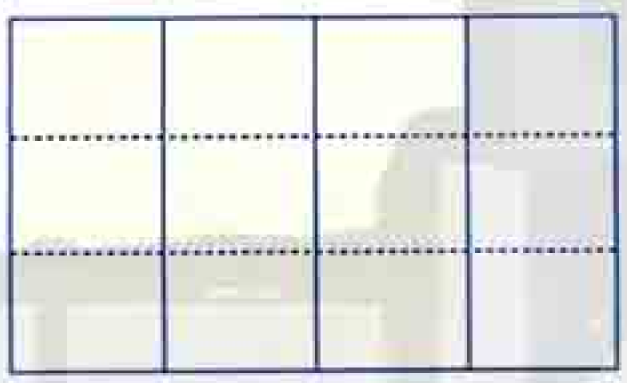
The coloured part represents $\frac{3}{4}$



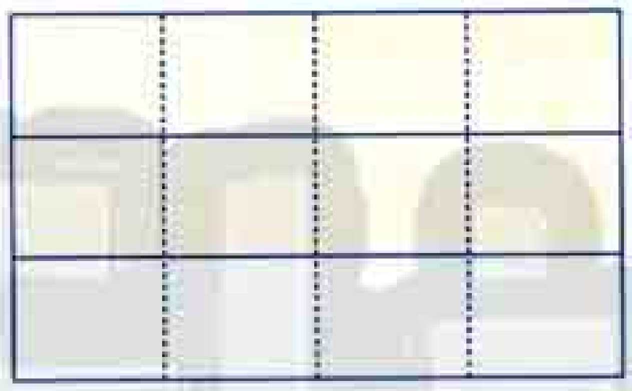
The coloured part represents $\frac{2}{3}$

Now , which is greater $\frac{3}{4}$ or $\frac{2}{3}$?

To answer this question , we divide each previous figure into 12 small squares as follows :



The coloured part represents $\frac{3}{4}$ which is $\frac{9}{12}$



The coloured part represents $\frac{2}{3}$ which is $\frac{8}{12}$

It is clear that : $\frac{9}{12} > \frac{8}{12}$

So : $\frac{3}{4} > \frac{2}{3}$

To compare between any two fractions of different numerators and denominators , do as follows :

1. Put each of the two fractions in its simplest form if it isn't.
2. If the numerators or the denominators of the two fractions after simplifying each of them are equal , then compare between them as we have studied before.
3. If the numerators or the denominators of the two fractions are not equal, then express the two fractions by two other equal fractions with least common denominator by using L.C.M. of the two denominators.
4. Compare between the two new fractions.

Example 3 *Compare using (>) or (<) :*

a $\frac{3}{4}$ ☐ $\frac{5}{6}$

b $\frac{10}{24}$ ☐ $\frac{14}{18}$

c $2\frac{2}{3}$ ☐ $\frac{7}{5}$

d $\frac{4}{5}$ ☐ 1

Solution

a The L.C.M. of 4 and 6 is 12

$$4 = 2 \times 2$$
$$6 = 2 \times 3$$
$$\text{L.C.M.} = 2 \times 2 \times 3 = 12$$

Then , $\frac{3}{4} = \frac{3 \times 3}{4 \times 3} = \frac{9}{12}$, $\frac{5}{6} = \frac{5 \times 2}{6 \times 2} = \frac{10}{12}$

Since , $\frac{9}{12} < \frac{10}{12}$ Therefore , $\frac{3}{4} < \frac{5}{6}$

b $\frac{10}{24} = \frac{10 \div 2}{24 \div 2} = \frac{5}{12}$ ($\frac{5}{12}$ is the simplest form of $\frac{10}{24}$)

, $\frac{14}{18} = \frac{14 \div 2}{18 \div 2} = \frac{7}{9}$ ($\frac{7}{9}$ is the simplest form of $\frac{14}{18}$)

The L.C.M. of 12 and 9 is 36

$$12 = 2 \times 2 \times 3$$
$$9 = 3 \times 3$$
$$\text{L.C.M.} = 2 \times 2 \times 3 \times 3 = 36$$

Then , $\frac{5}{12} = \frac{5 \times 3}{12 \times 3} = \frac{15}{36}$

and $\frac{7}{9} = \frac{7 \times 4}{9 \times 4} = \frac{28}{36}$

Since , $\frac{15}{36} < \frac{28}{36}$ Therefore , $\frac{10}{24} < \frac{14}{18}$

c $2\frac{2}{3} = \frac{8}{3}$

i.e. we want to compare $\frac{8}{3}$ and $\frac{7}{5}$

The L.C.M. of 3 and 5 is 15

Then , $\frac{8}{3} = \frac{8 \times 5}{3 \times 5} = \frac{40}{15}$, $\frac{7}{5} = \frac{7 \times 3}{5 \times 3} = \frac{21}{15}$

Since , $\frac{40}{15} > \frac{21}{15}$ Therefore , $\frac{8}{3} > \frac{7}{5}$ i.e. $2\frac{2}{3} > \frac{7}{5}$

d Since $1 = \frac{5}{5}$ and $\frac{4}{5} < \frac{5}{5}$ Therefore , $\frac{4}{5} < 1$

Lesson 2

Important Remarks :

1. Any proper fraction is smaller than 1 , for example $\frac{2}{3} < 1$
2. Any improper fraction is greater than 1 , for example $\frac{7}{4} > 1$
3. Any improper fraction is greater than any proper fraction , for example $\frac{11}{5} > \frac{5}{6}$

Example 4 *Arrange the following fractions in a descending order :*

$$\frac{7}{12} , \frac{5}{6} , \frac{7}{8} \text{ and } \frac{2}{3}$$

Solution

12 =	2 × 2		× 3
6 =	2		× 3
8 =	2 × 2 × 2		
3 =			3
L.C.M. = 2 × 2 × 2 × 3 = 24			

$\frac{7}{12} = \frac{7 \times 2}{12 \times 2} = \frac{14}{24}$, $\frac{5}{6} = \frac{5 \times 4}{6 \times 4} = \frac{20}{24}$

, $\frac{7}{8} = \frac{7 \times 3}{8 \times 3} = \frac{21}{24}$, $\frac{2}{3} = \frac{2 \times 8}{3 \times 8} = \frac{16}{24}$

Since , the descending order of the numerators is 21 , 20 , 16 and 14

So , $\frac{21}{24} > \frac{20}{24} > \frac{16}{24} > \frac{14}{24}$

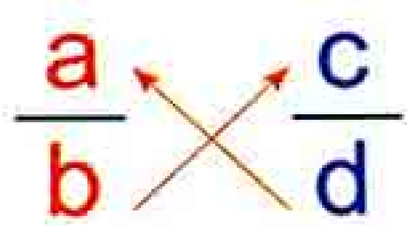
Then , the descending order of the fractions is $\frac{7}{8}$, $\frac{5}{6}$, $\frac{2}{3}$ and $\frac{7}{12}$

Enrich your knowledge : Cross multiplication method :

To compare $\frac{a}{b}$ and $\frac{c}{d}$, do as follows :

Find the products d × a and b × c , then :

- If (d × a) < (b × c) , then $\frac{a}{b} < \frac{c}{d}$
- If (d × a) > (b × c) , then $\frac{a}{b} > \frac{c}{d}$
- If (d × a) = (b × c) , then $\frac{a}{b} = \frac{c}{d}$



Example 5 *Compare using (>), (<) or (=) :*

a $\frac{3}{4}$ ☐ $\frac{5}{6}$ b $2\frac{4}{7}$ ☐ $\frac{5}{2}$ c $1\frac{1}{3}$ ☐ $1\frac{3}{9}$

Solution

a (18) (20)

$\frac{3}{4} \times \frac{5}{6}$

Since 18 < 20

So , $\frac{3}{4} < \frac{5}{6}$

b Since $2\frac{4}{7} = \frac{18}{7}$

(36) (35)

$\frac{18}{7} \times \frac{5}{2}$

Since 36 > 35

So , $\frac{18}{7} > \frac{5}{2}$

So , $2\frac{4}{7} > \frac{5}{2}$

c Since $1\frac{1}{3} = \frac{4}{3}$, $1\frac{3}{9} = \frac{12}{9}$

(36) (36)

$\frac{4}{3} \times \frac{12}{9}$

Since 36 = 36

So , $\frac{4}{3} = \frac{12}{9}$

So , $1\frac{1}{3} = 1\frac{3}{9}$

Exercise 2

Fractions

From the school book

1 Put (✓) for the correct statement and (×) for the incorrect ones :

a $\frac{2}{5}$ is an improper fraction. ( )

b $\frac{7}{5}$ is an improper fraction. ( )

c $\frac{17}{12}$ is a proper fraction. ( )

d $\frac{11}{15}$ is a proper fraction. ( )

e $5\frac{7}{8}$ is a mixed number. ( )

f $\frac{25}{3}$ is a mixed number. ( )

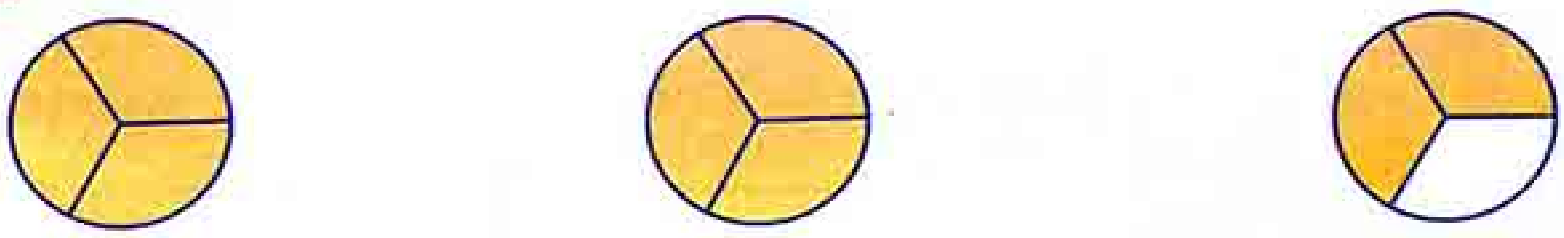
2 State which is a proper fraction, an improper fraction or a mixed number in each of the following :

a $\frac{5}{6}$ .... b $\frac{6}{5}$ .... c $\frac{12}{7}$ ....

d $\frac{6}{7}$ .... e $5\frac{3}{8}$ .... f $3\frac{5}{12}$ ....

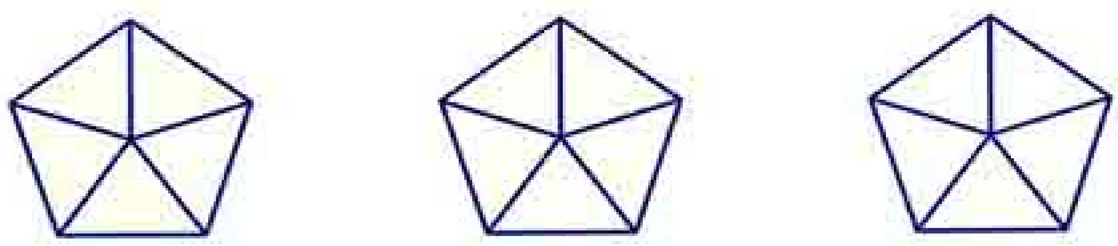
3 Complete as in the example :

Example



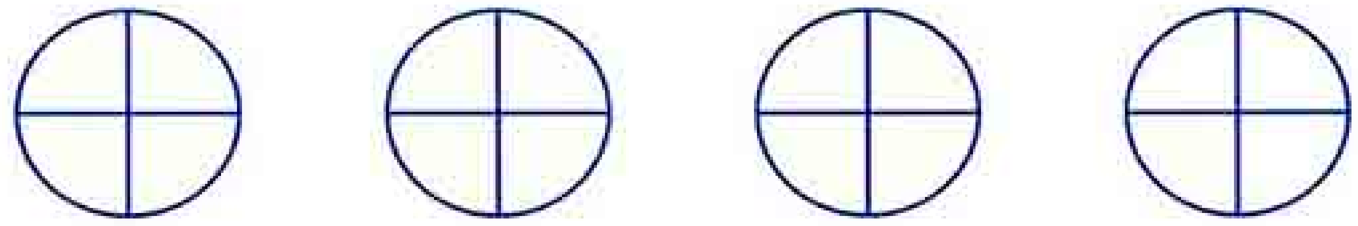
$2\frac{2}{3} = \frac{8}{3}$

a



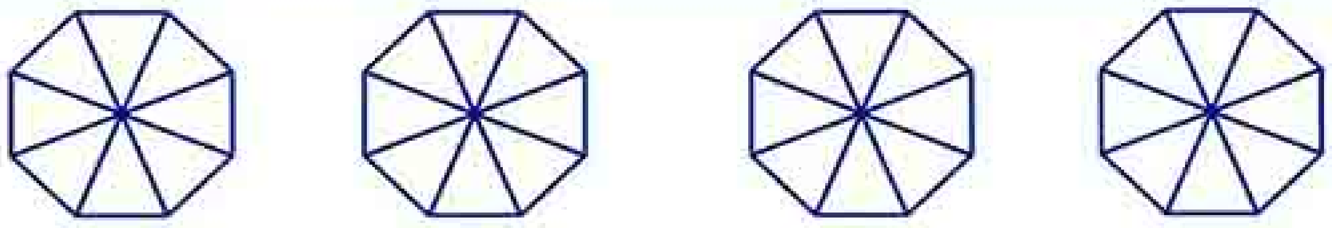
.... $\frac{\text{......}}{\text{......}}$ = $\frac{\text{......}}{\text{......}}$

b



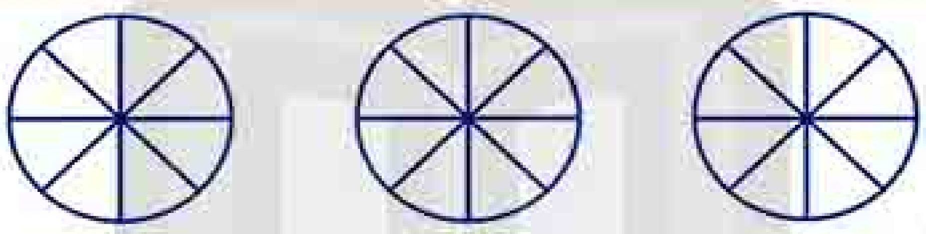
.... $\frac{\dots}{\dots} = \frac{\dots}{\dots}$

c



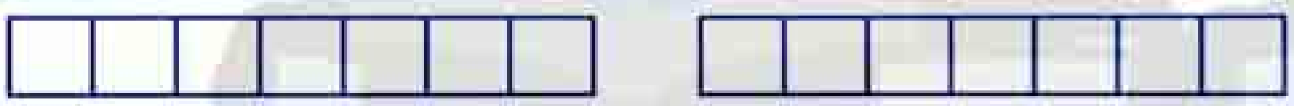
.... $\frac{\dots}{\dots} = \frac{\dots}{\dots}$

d



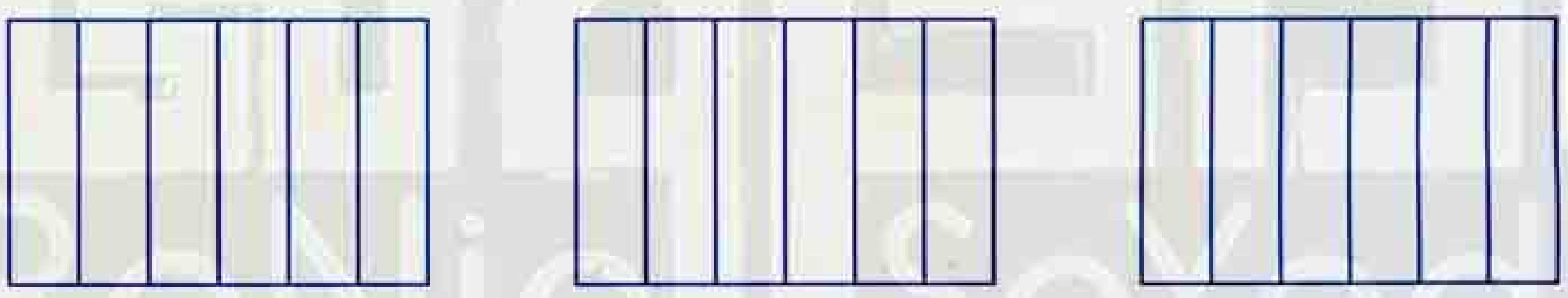
.... $\frac{\dots}{\dots} = \frac{\dots}{\dots}$

e



.... $\frac{\dots}{\dots} = \frac{\dots}{\dots}$

f



.... $\frac{\dots}{\dots} = \frac{\dots}{\dots}$

4 **Complete as in the example :**

Example

• $5 = \frac{5}{1}$ • $6 = \frac{12}{2}$ • $5 = \frac{30}{6}$

a 📖 $8 = \frac{\dots}{1}$

b $3 = \frac{\dots}{2}$

c 📖 $3 = \frac{\dots}{3}$

d 📖 $5 = \frac{\dots}{2}$

e $\frac{9}{9} = \dots$

f 📖 $\frac{18}{\dots} = 3$

g 📖 $10 = \frac{50}{\dots}$

h $11 = \frac{33}{\dots}$

i 📖 $7 = \frac{\dots}{10}$

j .... $= \frac{24}{6}$

k $2 = \frac{12}{\dots}$

l 📖 $6 = \frac{\dots}{6}$

Lesson 2

5 Complete as in the example :

Example

$$\frac{39}{4} = \frac{36}{4} + \frac{3}{4} = 9 + \frac{3}{4} = 9\ \frac{3}{4}$$

a $\frac{65}{9} = \frac{\dots}{9} + \frac{2}{9} = \dots + \frac{2}{9} = \dots \frac{2}{9}$

b $\frac{47}{8} = \frac{\dots}{8} + \frac{7}{8} = \dots + \frac{7}{8} = \dots \frac{7}{8}$

c $\frac{87}{7} = \frac{\dots}{7} + \frac{3}{7} = \dots + \frac{3}{7} = \dots \frac{3}{7}$

d $\frac{57}{5} = \frac{\dots}{5} + \frac{\dots}{5} = \dots + \frac{\dots}{5} = \dots \frac{\dots}{5}$

6 Write each of the following as an improper fraction as in the example :

Example $2\frac{1}{3} = \frac{7}{3}$	a $4\frac{1}{2} = \frac{\dots}{\dots}$	b $3\frac{1}{2} = \frac{\dots}{\dots}$
c 📖 $3\frac{1}{4} = \frac{\dots}{\dots}$	d 📖 $10\frac{1}{2} = \frac{\dots}{\dots}$	e 📖 $2\frac{1}{5} = \frac{\dots}{\dots}$
f $3\frac{4}{5} = \frac{\dots}{\dots}$	g $5\frac{1}{6} = \frac{\dots}{\dots}$	h $8\frac{2}{7} = \frac{\dots}{\dots}$
i $7\frac{8}{11} = \frac{\dots}{\dots}$	j 📖 $4\frac{1}{10} = \frac{\dots}{\dots}$	k $5\frac{7}{12} = \frac{\dots}{\dots}$

7 Write each of the following improper fractions as a mixed number in the simplest form as in the example :

Example $\frac{8}{3} = 2\frac{2}{3}$	a 📖 $\frac{5}{4} = \dots \frac{\dots}{\dots}$	b $\frac{11}{10} = \dots \frac{\dots}{\dots}$
c $\frac{17}{4} = \dots \frac{\dots}{\dots}$	d $\frac{19}{8} = \dots \frac{\dots}{\dots}$	e 📖 $\frac{9}{2} = \dots \frac{\dots}{\dots}$
f $\frac{43}{7} = \dots \frac{\dots}{\dots}$	g $\frac{37}{6} = \dots \frac{\dots}{\dots}$	h 📖 $\frac{63}{10} = \dots \frac{\dots}{\dots}$
i $\frac{22}{6} = \frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$	j $\frac{35}{21} = \frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$	k $\frac{45}{36} = \frac{\dots}{\dots} = \dots \frac{\dots}{\dots}$

8 **Put the suitable relation (< , > or =) :**

a $\frac{3}{4}$ ☐ $\frac{2}{5}$

b 📖 $\frac{5}{6}$ ☐ $\frac{2}{3}$

c $\frac{5}{8}$ ☐ $\frac{2}{3}$

d $\frac{7}{9}$ ☐ $\frac{3}{4}$

e $\frac{5}{2}$ ☐ $\frac{3}{5}$

f 📖 $\frac{2}{5}$ ☐ $\frac{5}{10}$

g $\frac{4}{5}$ ☐ $\frac{3}{7}$

h 📖 $\frac{6}{7}$ ☐ $\frac{5}{6}$

i 📖 $\frac{8}{12}$ ☐ $\frac{2}{3}$

j 1 ☐ $\frac{5}{3}$

k $2\frac{1}{4}$ ☐ $2\frac{1}{3}$

l $\frac{8}{5}$ ☐ $1\frac{1}{6}$

9 **Compare the following fractions :**

a $\frac{7}{3}$, $\frac{4}{5}$

b $\frac{5}{6}$, $\frac{7}{8}$

c $\frac{7}{12}$, $\frac{5}{6}$

d 📖 $\frac{8}{9}$, $\frac{9}{10}$

e 📖 $\frac{5}{42}$, $\frac{3}{7}$

f $2\frac{3}{4}$, $\frac{5}{2}$

g $2\frac{7}{9}$, $2\frac{3}{5}$

h $5\frac{6}{7}$, $5\frac{7}{8}$

10 **Arrange each of the following in an ascending order :**

a 📖 $\frac{3}{5}$, $\frac{2}{3}$ and $\frac{7}{15}$ The order is : .... , ... , ...

b $\frac{1}{3}$, $\frac{3}{4}$, $\frac{5}{6}$ and $\frac{7}{12}$ The order is : .... , ... , ... , ...

c $\frac{2}{3}$, $\frac{8}{9}$, $\frac{5}{12}$ and $\frac{11}{36}$ The order is : .... , ... , ... , ...

d $\frac{15}{8}$, $1\frac{1}{6}$, $1\frac{11}{12}$ and $\frac{31}{24}$ The order is : .... , ... , ... , ...

11 **Arrange each of the following in a descending order :**

a $\frac{3}{7}$, $\frac{5}{21}$ and $\frac{1}{3}$ The order is : .... , ... , ...

b $\frac{2}{3}$, $\frac{3}{8}$, $\frac{1}{6}$ and $\frac{5}{12}$ The order is : .... , ... , ... , ...

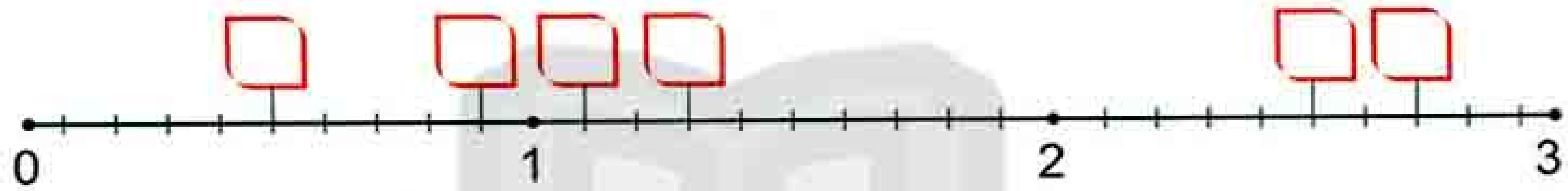
Lesson 2

c $\frac{3}{5}$, $\frac{1}{2}$, $\frac{9}{10}$ and $\frac{1}{4}$ The order is : .... , ... , ... , ...

d $1\frac{1}{2}$, $1\frac{3}{8}$, $\frac{31}{16}$ and $\frac{23}{24}$ The order is : .... , ... , ... , ...

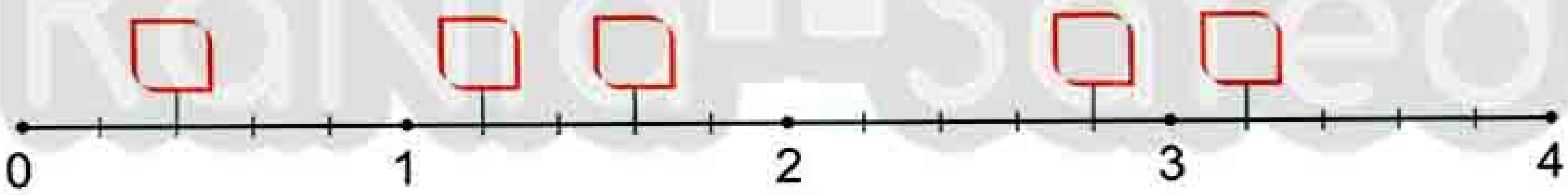
12 Write each of the following in its suitable place on the number line :

a $1\frac{1}{10}$, $2\frac{1}{2}$, $\frac{9}{10}$, $1\frac{3}{10}$, $2\frac{7}{10}$, $\frac{1}{2}$



b $\frac{13}{10}$, $\frac{19}{10}$, $\frac{17}{10}$, $\frac{4}{5}$, $\frac{3}{2}$

c $1\frac{3}{5}$, $1\frac{1}{5}$, $\frac{2}{5}$, $3\frac{1}{5}$, $2\frac{4}{5}$



13 Find the result of the following as a mixed number :

a $\frac{5}{9} + \frac{3}{9} + \frac{4}{9}$

b $\frac{3}{8} + \frac{2}{8} + \frac{4}{8}$

c $\frac{2}{11} + \frac{5}{11} + \frac{7}{11}$

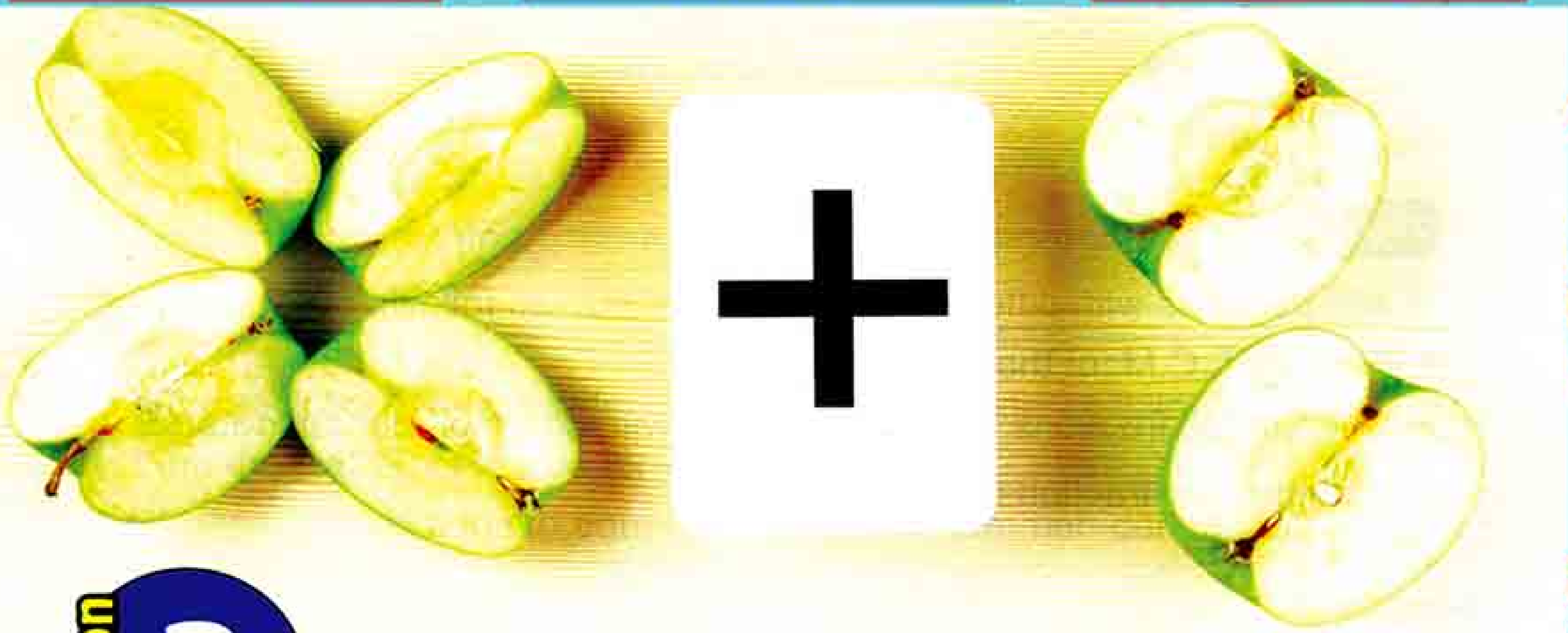
d $\frac{2}{3} + \frac{4}{3} + \frac{1}{3}$

e $(\frac{4}{7} + \frac{5}{7}) - \frac{1}{7}$

f $(\frac{8}{15} + \frac{13}{15}) - \frac{4}{15}$

g $(\frac{3}{5} + \frac{6}{5}) + 1$

h $(\frac{7}{9} - \frac{2}{9}) + \frac{4}{9}$

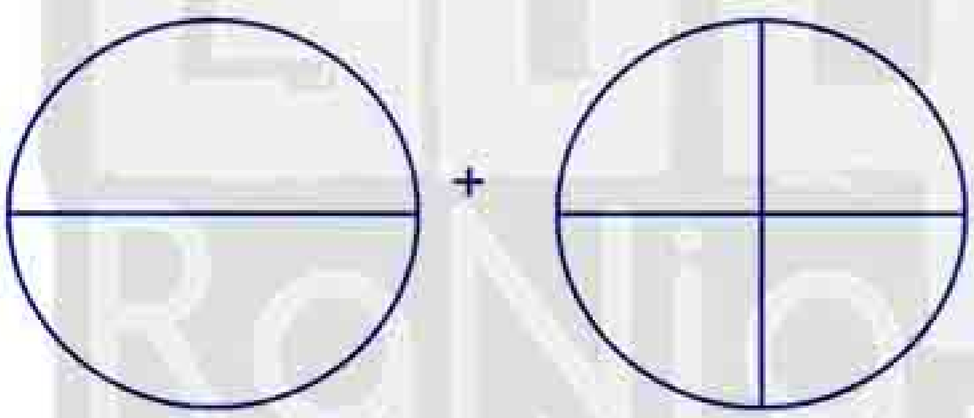


Lesson 3

Adding and subtracting the fractions have different denominators

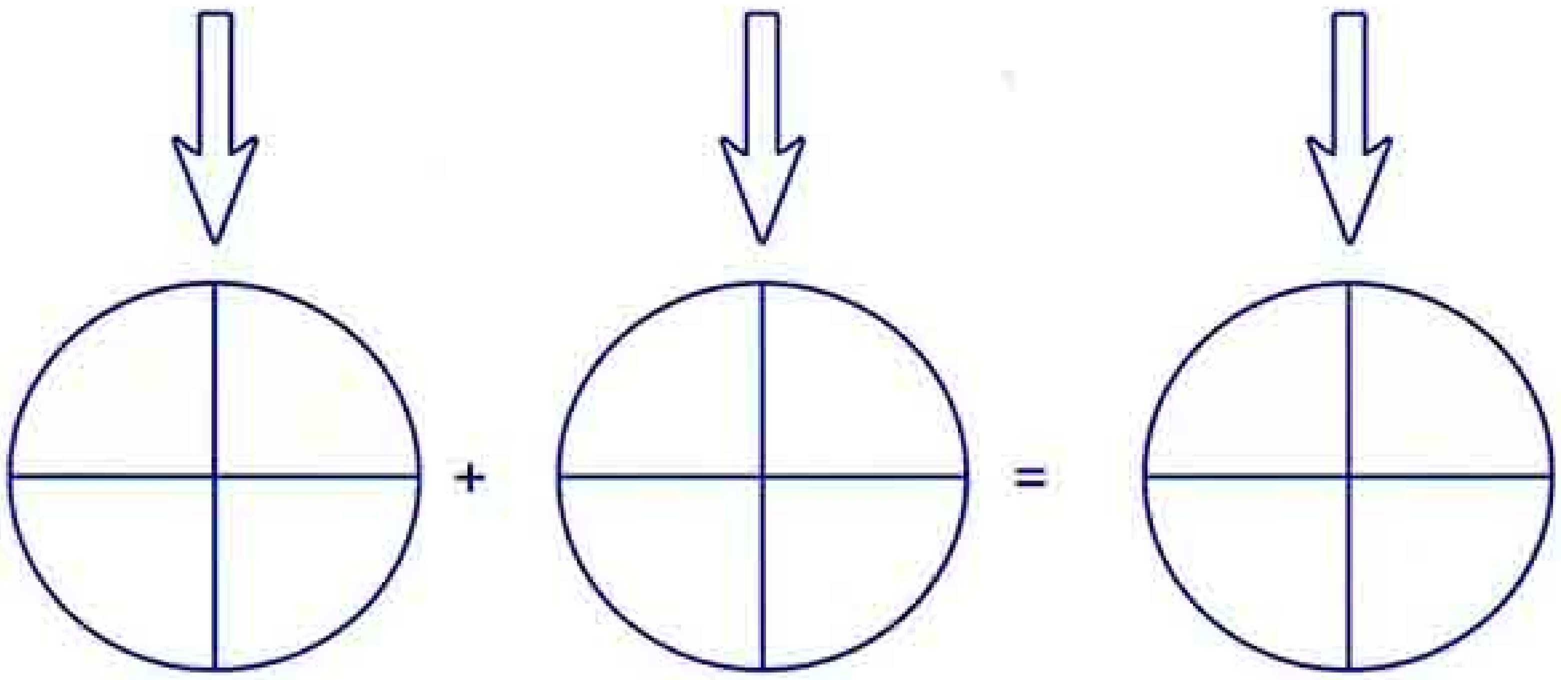
First Adding fractions with different denominators

• To find $\frac{1}{2} + \frac{1}{4}$, notice the following figures :



= ?

$\frac{1}{2} + \frac{1}{4} = ?$



$\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$

Lesson 3

Rule

To add fractions with different denominators , do as follows :

1. Find the L.C.M. of the denominators.
2. Change the fractions to equal fractions with common denominators.
3. Add the new fractions.

Example 1 *Add the following :*

a $\frac{1}{3} + \frac{1}{5}$ **b** $\frac{1}{4} + \frac{1}{6}$ **c** $\frac{3}{4} + \frac{5}{8}$

Solution

a $\frac{1}{3} + \frac{1}{5} = \frac{5}{15} + \frac{3}{15}$ (L.C.M. of 3 and 5 is 15)

$= \frac{8}{15}$

b $\frac{1}{4} + \frac{1}{6} = \frac{3}{12} + \frac{2}{12}$ (L.C.M. of 4 and 6 is 12)

$= \frac{5}{12}$

c $\frac{3}{4} + \frac{5}{8} = \frac{6}{8} + \frac{5}{8}$ (L.C.M. of 4 and 8 is 8)

$= \frac{11}{8} = 1\frac{3}{8}$

Example 2 *Add the following :*

a $\frac{2}{3} + \frac{1}{6} + \frac{5}{8}$ **b** $4\frac{1}{4} + 3\frac{2}{5}$

Solution

c $\frac{2}{3} + \frac{1}{6} + \frac{5}{8} = \frac{16}{24} + \frac{4}{24} + \frac{15}{24}$ (L.C.M. of 3 , 6 and 8 is 24)

$= \frac{35}{24} = 1\frac{11}{24}$

b $4\frac{1}{4} + 3\frac{2}{5} = 4\frac{5}{20} + 3\frac{8}{20}$ (L.C.M. of 4 and 5 is 20)

$= 7\frac{13}{20}$

Second Subtracting fractions with different denominators

Rule

To subtract fractions with different denominators , do as follows :

1. Find the L.C.M. of the denominators.
2. Change the fractions to equal fractions with common denominators.
3. Subtract the new fractions.

Example 3 *Subtract the following :*

a $\frac{1}{4} - \frac{1}{5}$ b $\frac{2}{3} - \frac{1}{6}$ c $3\frac{1}{5} - 1\frac{1}{6}$

Solution

a $\frac{1}{4} - \frac{1}{5} = \frac{5}{20} - \frac{4}{20}$ (L.C.M. of 4 and 5 is 20)

$= \frac{1}{20}$

b $\frac{2}{3} - \frac{1}{6} = \frac{4}{6} - \frac{1}{6}$ (L.C.M. of 3 and 6 is 6)

$= \frac{3}{6} = \frac{1}{2}$

c $3\frac{1}{5} - 1\frac{1}{6} = 3\frac{6}{30} - 1\frac{5}{30}$ (L.C.M. of 5 and 6 is 30)

$= 2\frac{1}{30}$

Example 4 *Find :*

a $6 - 3\frac{5}{9}$ b $(11\frac{3}{5} + 2\frac{1}{15}) - 12\frac{1}{3}$

Solution

a Rewrite 6 as the mixed number $5\frac{9}{9}$

Then , $6 - 3\frac{5}{9} = 5\frac{9}{9} - 3\frac{5}{9} = 2\frac{4}{9}$

b Since , L.C.M. of 5 , 15 , 3 is 15

Then , $(11\frac{3}{5} + 2\frac{1}{15}) - 12\frac{1}{3} = (11\frac{9}{15} + 2\frac{1}{15}) - 12\frac{5}{15}$

$= 13\frac{10}{15} - 12\frac{5}{15} = 1\frac{5}{15} = 1\frac{1}{3}$

Exercise 3 Adding and subtracting the fractions have different denominators

From the school book

1 Add :

a $\frac{1}{3} + \frac{1}{4}$

b $\frac{1}{5} + \frac{1}{3}$

c $\frac{1}{2} + \frac{1}{7}$

d $\frac{1}{4} + \frac{1}{8}$

e $\frac{1}{6} + \frac{1}{8}$

f $\frac{3}{7} + \frac{1}{6}$

g (From the school book) $\frac{2}{3} + \frac{3}{4}$

h $\frac{3}{7} + \frac{4}{5}$

i $\frac{1}{4} + \frac{3}{10}$

j $\frac{7}{8} + \frac{5}{6}$

k $\frac{2}{3} + \frac{7}{8}$

l $\frac{5}{9} + \frac{2}{5}$

2 Subtract :

a $\frac{1}{3} - \frac{1}{5}$

b $\frac{5}{6} - \frac{1}{2}$

c (From the school book) $\frac{5}{6} - \frac{1}{3}$

d $\frac{1}{4} - \frac{1}{5}$

e $\frac{4}{7} - \frac{1}{3}$

f $\frac{2}{3} - \frac{1}{6}$

g $\frac{2}{5} - \frac{1}{10}$

h $\frac{4}{5} - \frac{1}{4}$

i $\frac{9}{10} - \frac{3}{5}$

j $\frac{5}{6} - \frac{2}{3}$

k $\frac{7}{8} - \frac{2}{5}$

l $\frac{5}{6} - \frac{3}{8}$

3 Choose the correct answer :

a $\frac{1}{4} + \frac{1}{5} =$ .... $(\frac{2}{9}$ or $\frac{9}{20}$ or $\frac{1}{20}$ or $\frac{2}{10})$

b $\frac{1}{4} + \frac{2}{3} =$ .... $(\frac{11}{12}$ or $\frac{2}{12}$ or $\frac{3}{12}$ or $\frac{3}{7})$

c $\frac{2}{7} + \frac{2}{5} =$ .... $(\frac{4}{35}$ or $\frac{4}{13}$ or $\frac{4}{12}$ or $\frac{24}{35})$

d $\frac{2}{5} + \frac{3}{8} =$ .... $(\frac{5}{40}$ or $\frac{31}{40}$ or $\frac{6}{40}$ or $\frac{5}{13})$

e $\frac{5}{9} + \frac{1}{3} =$ .... $(\frac{7}{9}$ or $\frac{6}{12}$ or $\frac{8}{9}$ or $\frac{5}{27})$

f $\frac{4}{5} - \frac{1}{20} =$ .... $(\frac{7}{20}$ or $\frac{4}{3}$ or $\frac{3}{4}$ or $1\frac{1}{5})$

g $\frac{6}{7} - \frac{1}{42} =$ .... $(\frac{5}{6}$ or $\frac{6}{5}$ or $1\frac{1}{7}$ or $\frac{36}{42})$

h $\frac{5}{6} - \frac{1}{30} =$ .... $\left(1\frac{1}{6} \text{ or } \frac{4}{5} \text{ or } \frac{4}{30} \text{ or } \frac{5}{4}\right)$

i $8 - \frac{2}{3} =$ .... $\left(\frac{6}{3} \text{ or } \frac{6}{5} \text{ or } 7\frac{2}{3} \text{ or } 7\frac{1}{3}\right)$

4 Find the result in the simplest form :

a $3\frac{1}{2} + 2\frac{1}{4}$

b $3\frac{1}{4} + 7\frac{1}{3}$

c $4\frac{1}{7} + 2\frac{1}{2}$

d $6\frac{1}{6} + 7\frac{1}{7}$

e $9\frac{2}{3} + 8\frac{1}{5}$

f $6\frac{4}{5} + 4\frac{2}{3}$

g $2\frac{5}{6} + \frac{8}{9}$

h $2\frac{1}{2} + \frac{4}{5}$

5 Find the result in the simplest form :

a $4\frac{2}{3} - 2\frac{1}{4}$

b $3\frac{1}{5} - 1\frac{1}{6}$

c $10\frac{1}{2} - 5\frac{1}{3}$

d $9\frac{3}{7} - 4\frac{1}{6}$

e $8\frac{11}{12} - 7\frac{3}{4}$

f $10\frac{1}{4} - 3\frac{1}{12}$

g $5\frac{5}{8} - 1\frac{1}{3}$

h $9\frac{1}{6} - 4\frac{4}{9}$

i $4\frac{1}{2} - \frac{1}{4}$

j $7 - \frac{1}{7}$

k $1\frac{1}{2} - \frac{3}{4}$

l 📖 $1\frac{4}{7} - \frac{10}{21}$

6 Find the result of each of the following in the simplest from :

a $\frac{1}{4} + \frac{2}{3} + \frac{1}{2}$

b $\frac{1}{5} + \frac{7}{10} + \frac{4}{15}$

c $2\frac{1}{3} + 3\frac{1}{5} + 7\frac{1}{6}$

d $7\frac{1}{4} + \frac{1}{6} + 1\frac{1}{3}$

e $\left(3\frac{3}{4} + 1\frac{7}{8}\right) - 2\frac{5}{6}$

f $\left(2\frac{2}{3} + \frac{1}{5}\right) - \frac{4}{5}$

g $\left(6\frac{3}{4} + 2\frac{1}{8}\right) - 7\frac{1}{2}$

h $\left(8\frac{3}{4} - 2\frac{1}{2}\right) + 3\frac{1}{8}$

i 📖 $\left(3\frac{1}{4} + 1\frac{1}{3}\right) - \frac{15}{12}$

j 📖 $\left(7\frac{2}{5} + 4\frac{1}{6}\right) - \frac{32}{30}$

Lesson 3

Real Life Problems

a One day , a flock of birds flew $6\frac{1}{3}$ hours. The next day , the birds flew $8\frac{1}{2}$ hours. How many hours did the birds fly during the two days ?

....

b Look at the following table and answer the following questions :

Age in Years	Hours of Sleep Needed
1	$13\frac{1}{3}$
5	$10\frac{1}{2}$
35	8
65	$5\frac{1}{3}$

1. How many more hours of sleep are needed by a 1-year old child than by a 5-year old child ?

....

2. How many more hours of sleep are needed by a 35-year old adult than by a 65-year old adult ?

....

3. A 35-year old adult slept $5\frac{1}{2}$ hours in the morning and $4\frac{2}{3}$ hours at night. How much more sleep is this than the amount needed ?

....

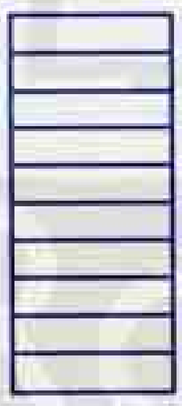
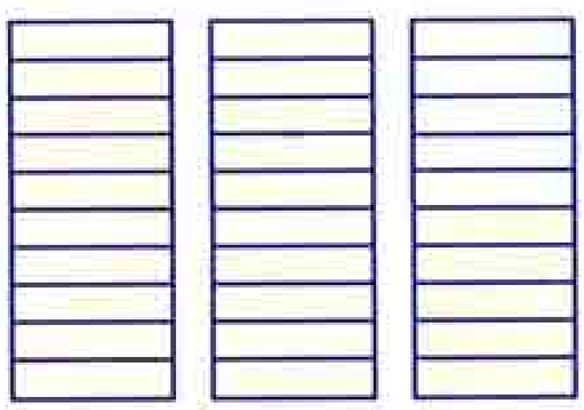
c Ahmed has L.E. 10 bought a pen for L.E. $3\frac{1}{4}$ and notebook for L.E. $2\frac{1}{4}$ Find the remainder with Ahmed.

....

Lesson 4

Decimal numbers

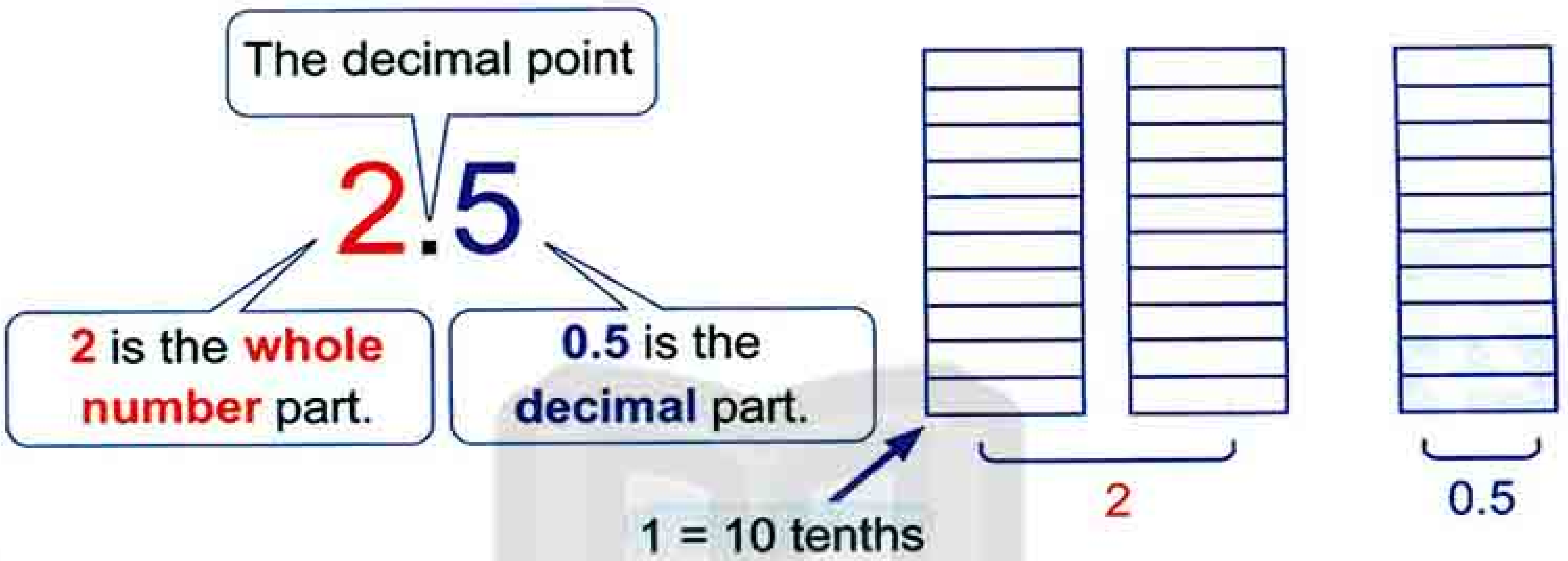
Fractions which have denominator **10** can be written by using a point that is called **the decimal point** as follows :

Fractions	Written as	Read as
 $\frac{7}{10}$	0.7	Seven tenths or zero point seven
 $2\frac{5}{10}$	2.5	Two and five tenths or two point five

Lesson 4

Notice that :

The number 2.5 consists of two parts, **a whole number** and **a decimal**.



Remark

To convert an improper fraction of denominator 10 to a decimal, do as follows :

- $\frac{25}{10} = \frac{20}{10} + \frac{5}{10} = 2 + \frac{5}{10} = 2\frac{5}{10} = 2.5$
- $\frac{354}{10} = \frac{350}{10} + \frac{4}{10} = 35 + \frac{4}{10} = 35\frac{4}{10} = 35.4$

i.e. To convert an improper fraction of denominator 10 to a decimal, put a decimal point after 1 digit from the right.

For Example

- $\frac{32}{10} = 3.2$
- $\frac{126}{10} = 12.6$

Example

Convert each of the following to the decimal form, then read the decimal number :

a $\frac{3}{5}$ **b** $12\frac{1}{2}$ **c** $\frac{14}{5}$ **d** $\frac{48}{40}$

Solution

We try to make the denominator equal to 10 by multiplying or dividing both the denominator and the numerator by the same number, then :

a $\frac{3}{5} = \frac{3 \times 2}{5 \times 2} = \frac{6}{10} = 0.6$ (Six tenths)

b $12\frac{1}{2} = 12\,\frac{1 \times 5}{2 \times 5} = 12\frac{5}{10} = 12.5$ (Twelve and five tenths)

c $\frac{14}{5} = \frac{14 \times 2}{5 \times 2} = \frac{28}{10} = 2.8$ (Two and eight tenths)

d $\frac{48}{40} = \frac{48 \div 4}{40 \div 4} = \frac{12}{10} = 1.2$ (One and two tenths)

The place value of decimals

Number	Hundreds	Tens	Units	•	Tenths
45.2		4	5	•	2
125.7	1	2	5	•	7
1.9			1	•	9
20.4		2	0	•	4

Exercise 4 — Decimal numbers

From the school book

1 Write each of the following using the decimal point as in the example :

Example

• $2\frac{9}{10} = 2.9$ • $\frac{7}{10} = 0.7$

a $7\frac{2}{10} = \dots\dots$ b $5\frac{1}{10} = \dots\dots$ c $8\frac{7}{10} = \dots\dots$

d $\frac{4}{10} = \dots\dots$ e $\frac{1}{10} = \dots\dots$ f $15\frac{3}{10} = \dots\dots$

g $45\frac{8}{10} = \dots\dots$ h $10\frac{7}{10} = \dots\dots$ i $142\frac{5}{10} = \dots\dots$

2 Convert each of the following decimal numbers to a proper fraction or a mixed number as in the example :

Example

• $8.1 = 8\frac{1}{10}$ • $0.6 = \frac{6}{10}$

a $9.4 = \dots\dots$ b $1.2 = \dots\dots$ c $6.7 = \dots\dots$

d $0.3 = \dots\dots$ e $97.1 = \dots\dots$ f $345.7 = \dots\dots$

3 Convert each of the following into a decimal form as in the example :

Example

• $\frac{5}{2} = \frac{5 \times 5}{2 \times 5} = \frac{25}{10} = 2.5$ • $3\frac{1}{5} = 3\,\frac{1 \times 2}{5 \times 2} = 3\frac{2}{10} = 3.2$

• $\frac{18}{30} = \frac{18 \div 3}{30 \div 3} = \frac{6}{10} = 0.6$

a $\frac{9}{2} = \dots\dots = \dots\dots = \dots\dots$

b $\frac{7}{2} = \dots\dots = \dots\dots = \dots\dots$

c 📖 $\frac{9}{5}$ = ... = ... = ...

d 📖 $\frac{1}{2}$ = ... = ... = ...

e $\frac{15}{2}$ = ... = ... = ...

f 📖 $4\frac{3}{5}$ = ... = ... = ...

g $248\frac{1}{2}$ = ... = ... = ...

h 📖 $\frac{14}{20}$ = ... = ... = ...

i $\frac{15}{50}$ = ... = ... = ...

4 Write in digits each of the following numbers as in the example :

Example

- Four and six tenths ⟶ 4.6
- Eight hundred, fifty three and two tenths ⟶ 853.2

a Seven tenths ⟶ ....

b Five and eight tenths ⟶ ....

c Eighteen and six tenths ⟶ ....

d Seventy-six and three tenths ⟶ ....

e Six hundred, thirty-five and nine tenths ⟶ ....

f Nine hundred, forty and one tenth ⟶ ....

g Three hundred, one and five tenths ⟶ ....

h Two thousand, seven hundred, sixteen and eight tenths ⟶ ....

Lesson 4

5 **Write in words each of the following numbers as in the example :**

Example

239.4 ⟶ Two hundred, thirty-nine and four tenths.

a 7.3 ⟶ ....

b 21.4 ⟶ ....

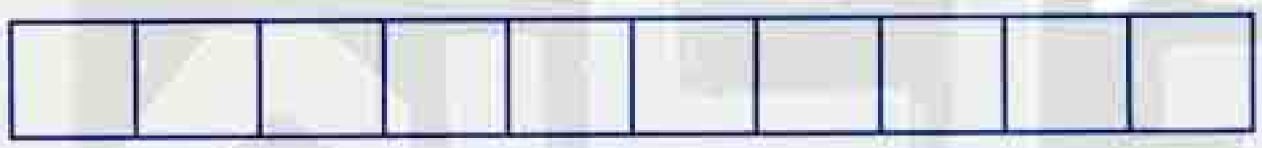
c 720.6 ⟶ ....

d 146.7 ⟶ ....

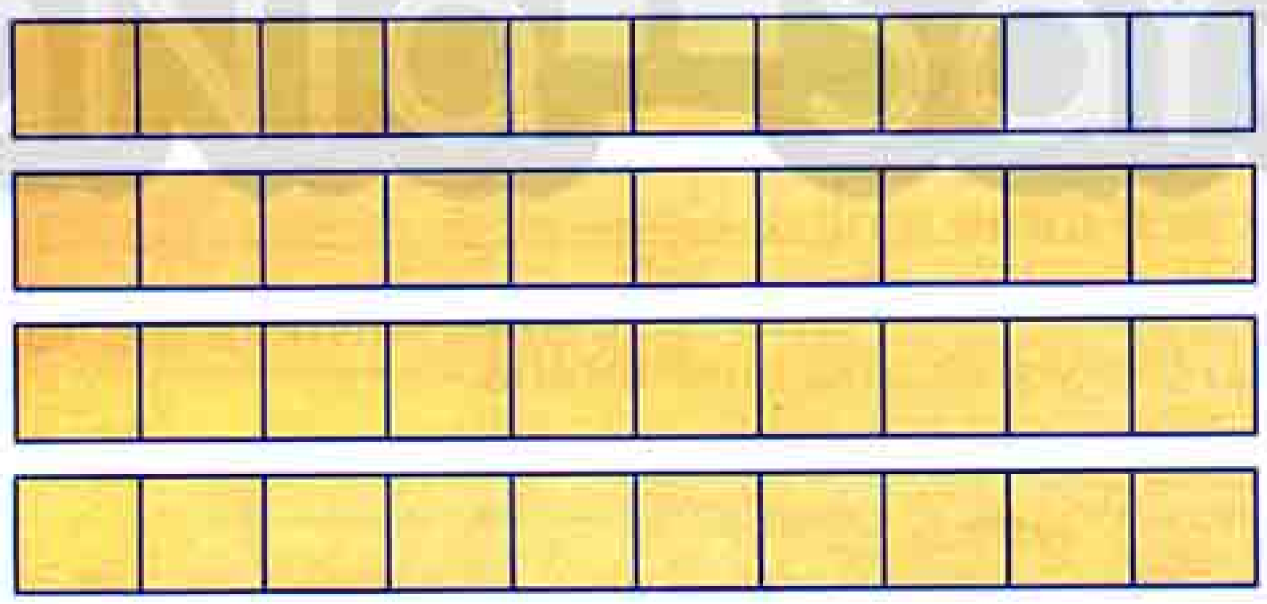
e 0.2 ⟶ ....

f 2 008.7 ⟶ ....

---

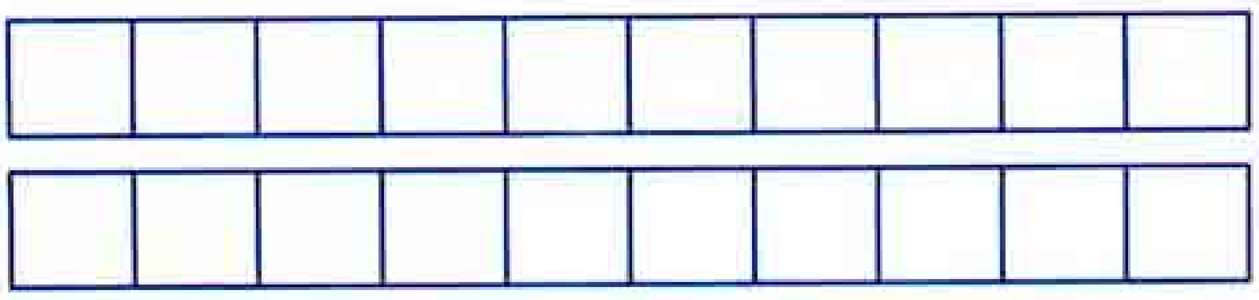
6 **If the coloured figure**  **represents the number 1 (one unit), write the number that represents the coloured parts of each of the following figures as in the example :**

Example



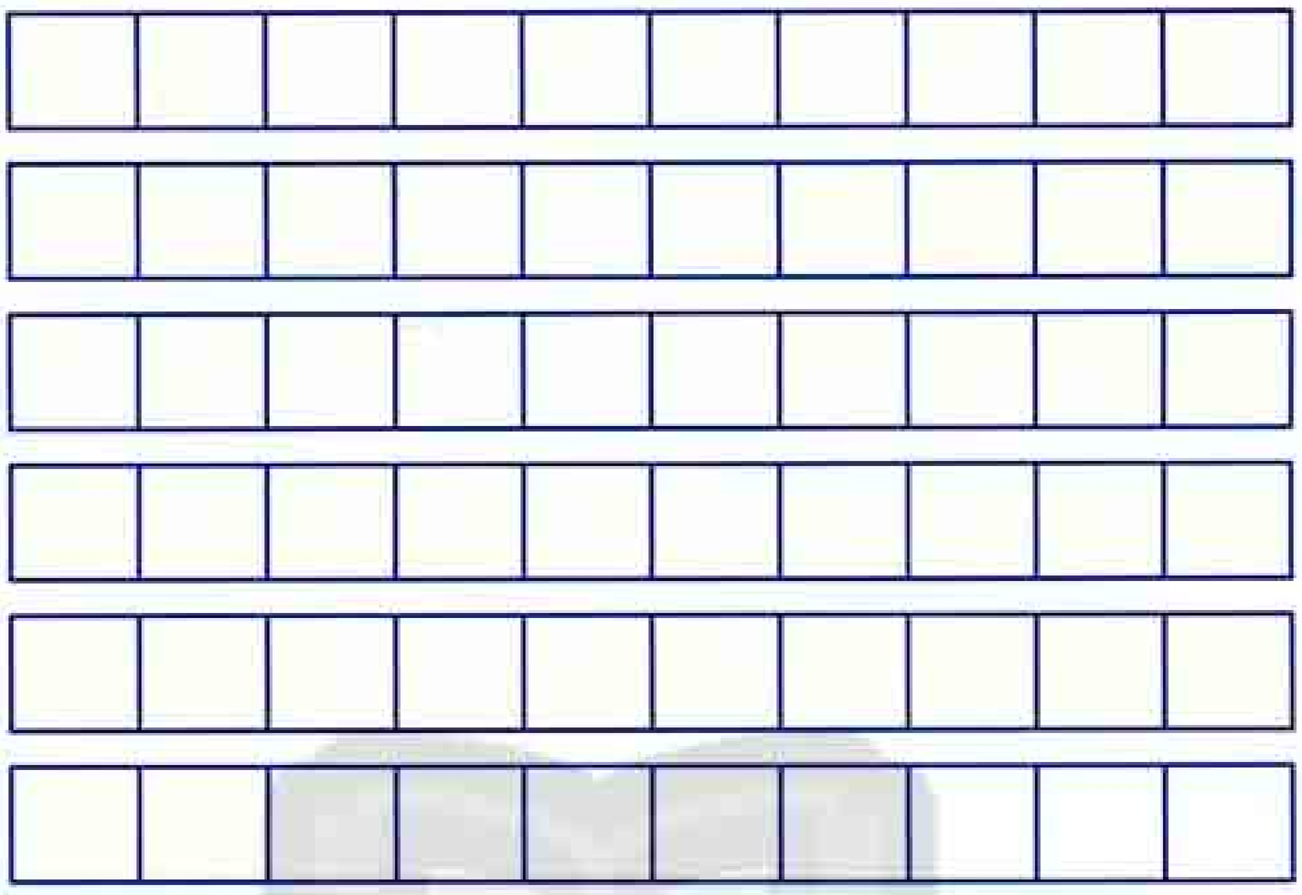
3.8

a



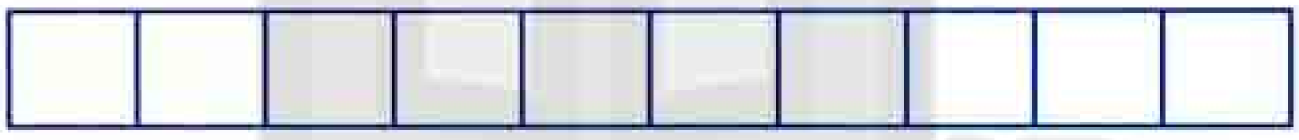
....

b



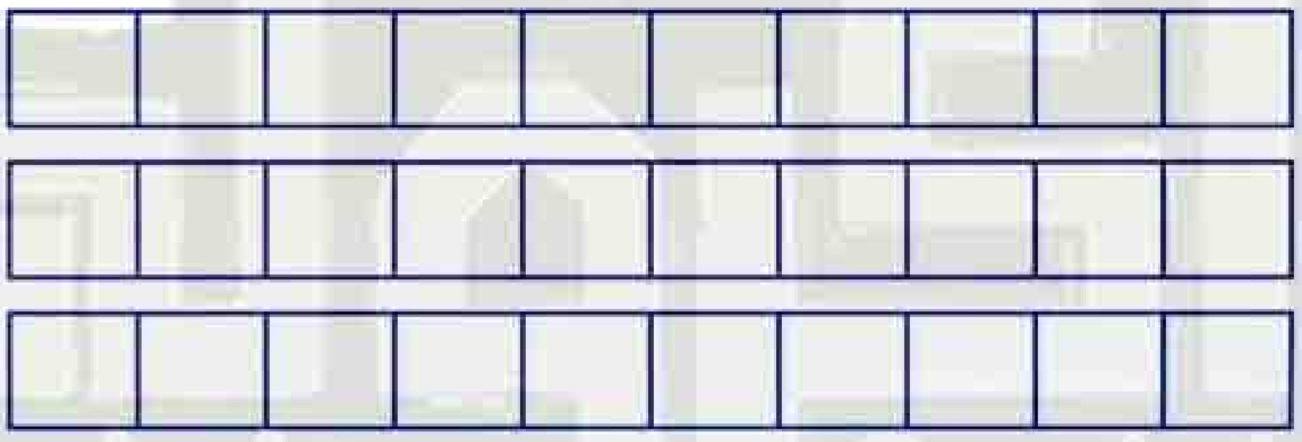
....

c



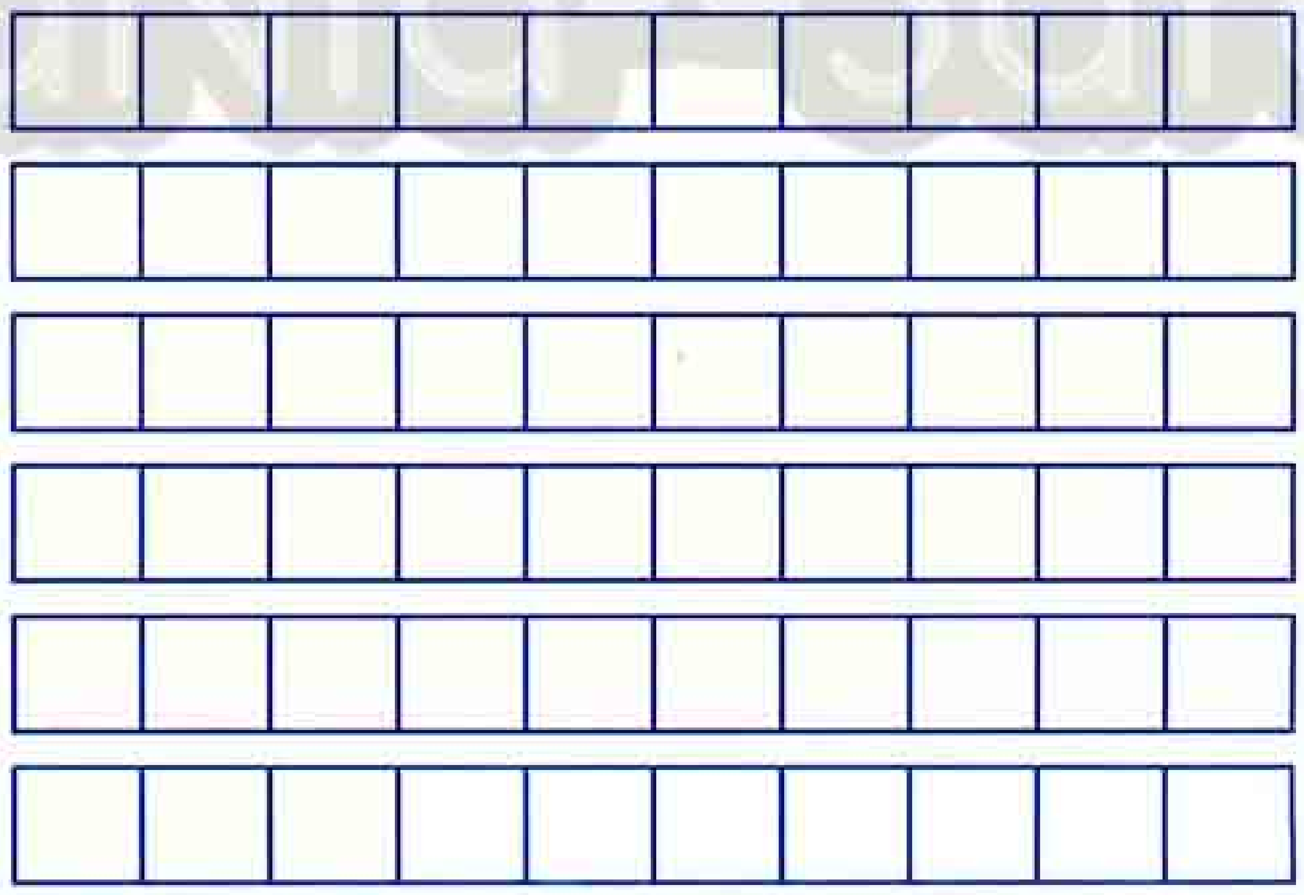
....

d



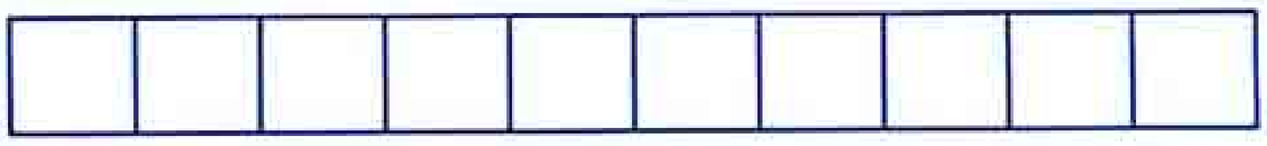
....

e

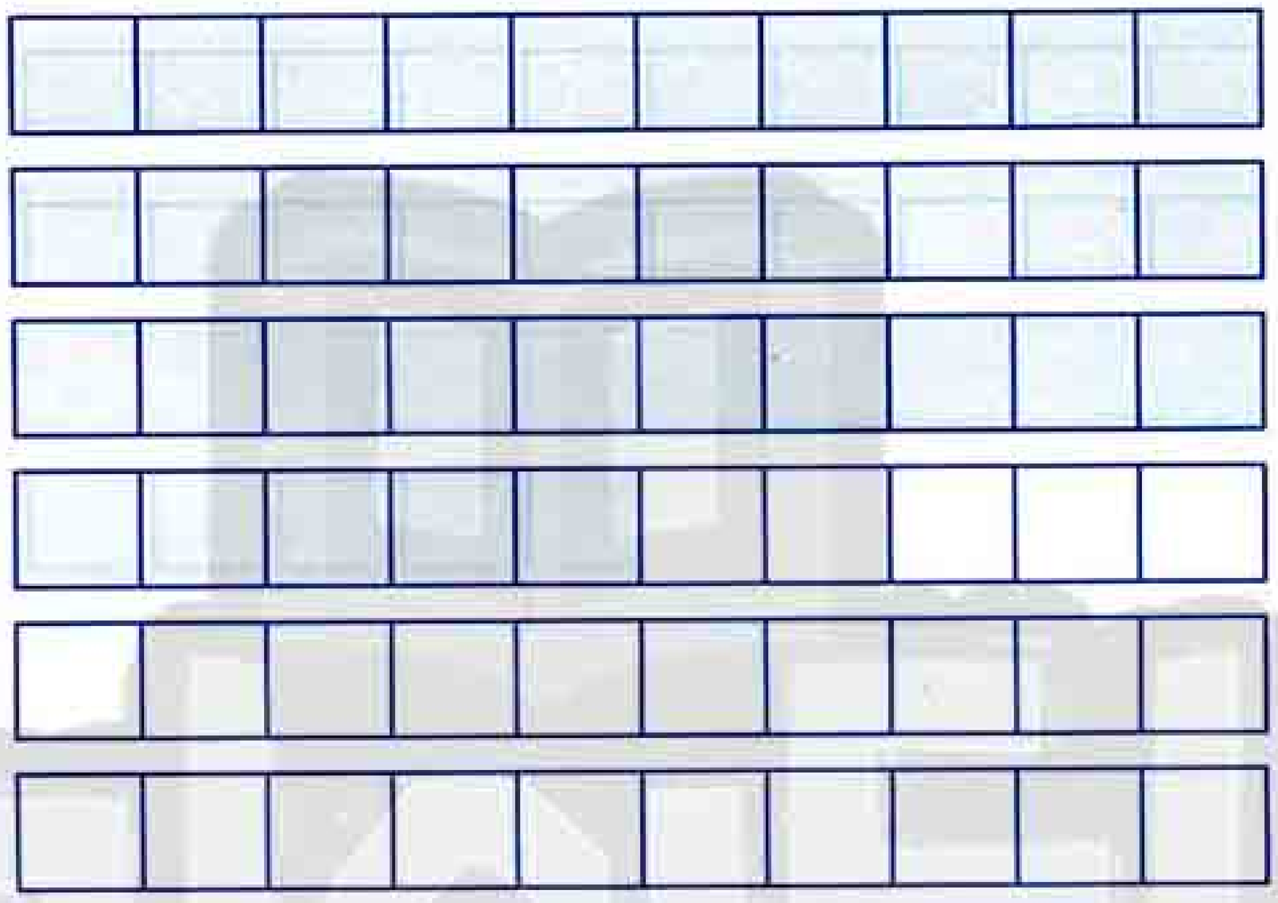


....

Lesson 4

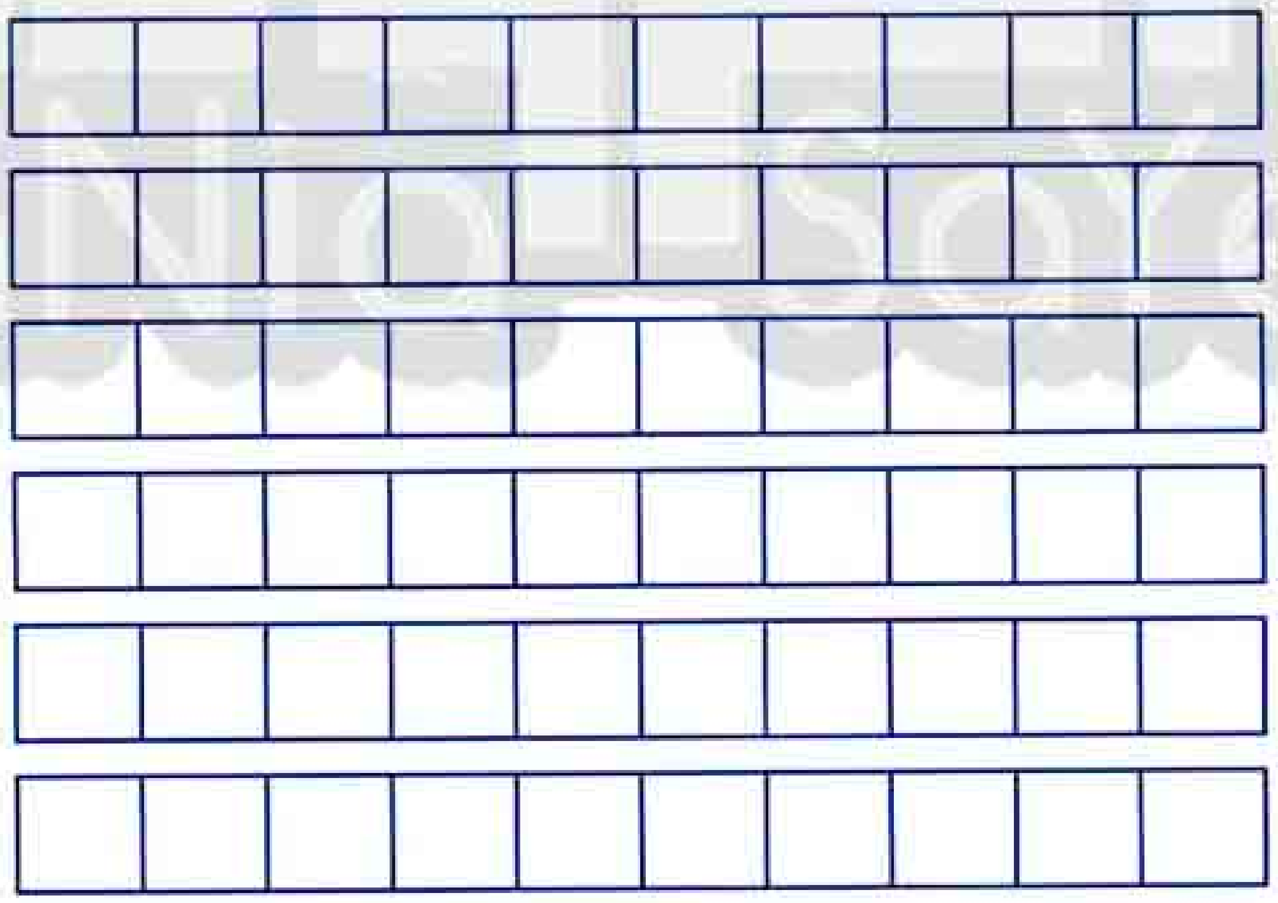
7 If the figure  represents the number 1 (one unit), colour the part of each of the following figures that represents the given decimal number in each of the following as in the example :

Example



3.5

a

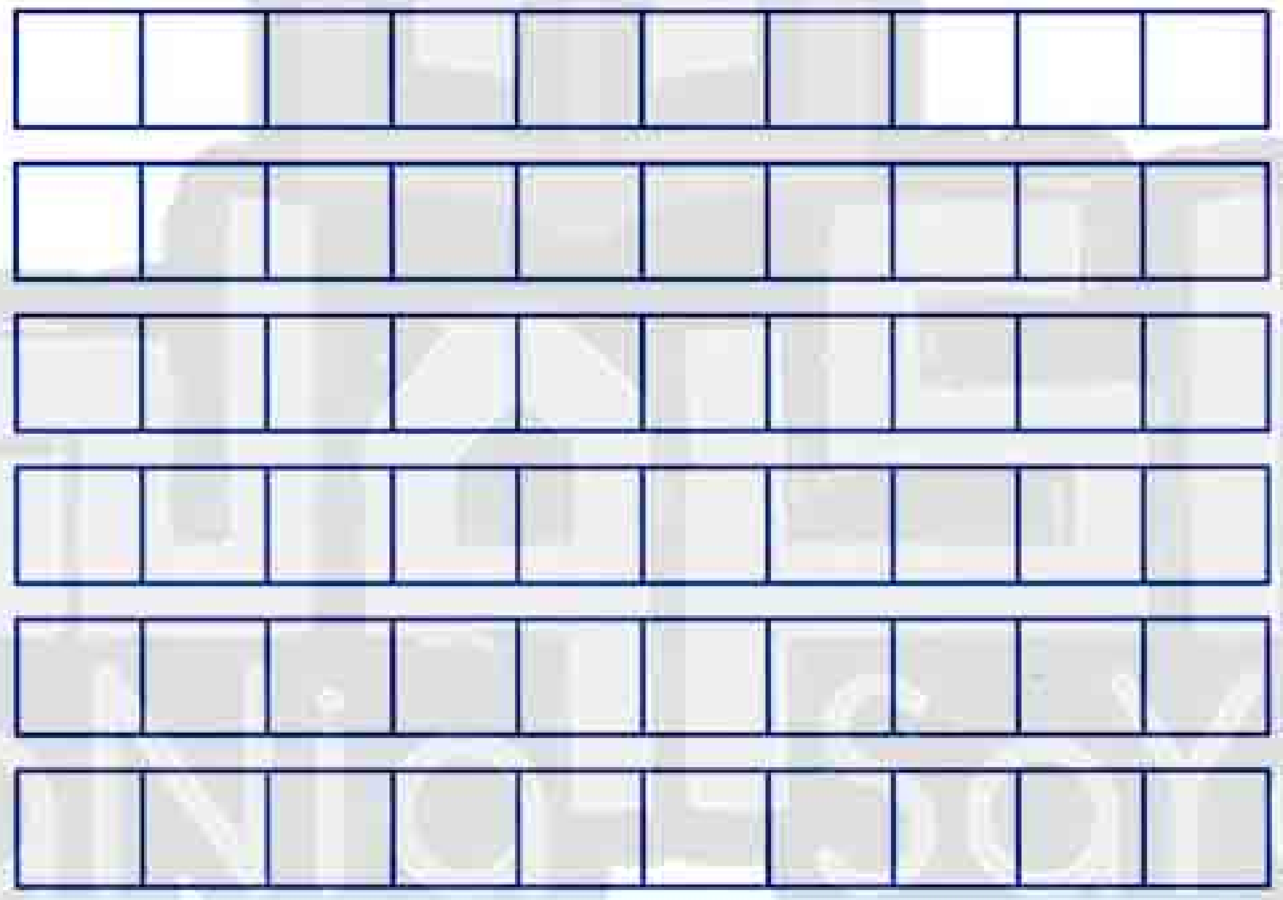


2.7

b

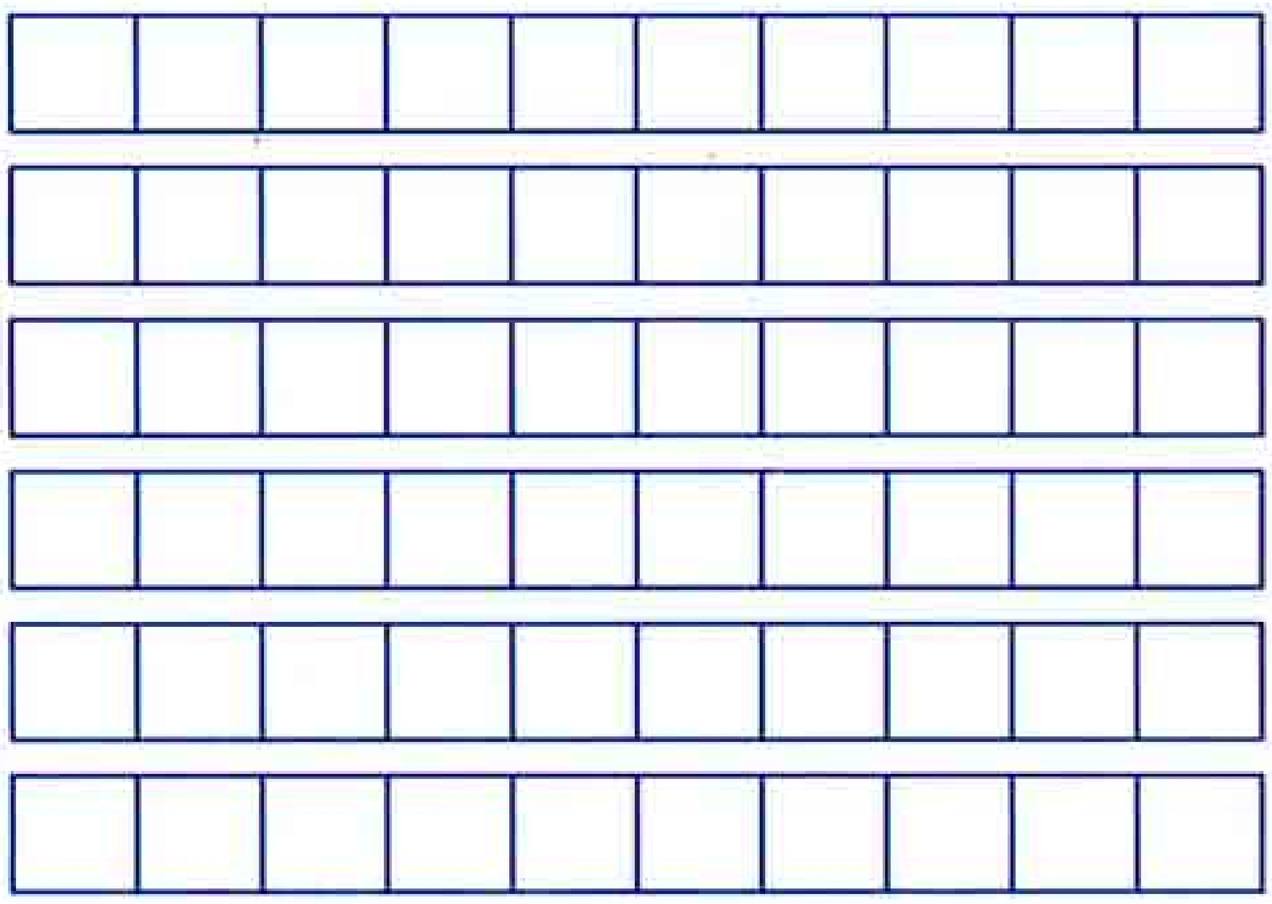
4.8

c



0.9

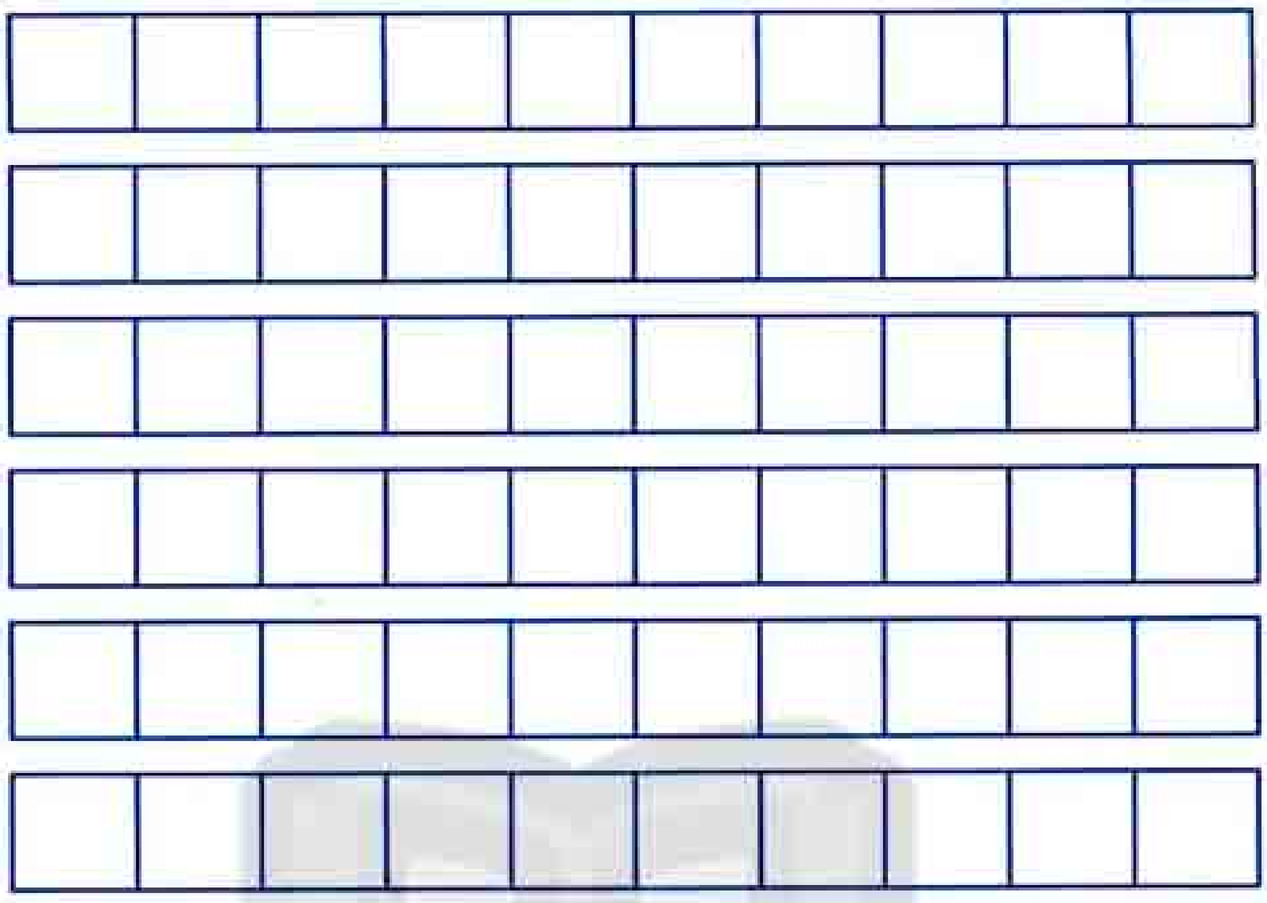
d



$\frac{2}{5}$

Lesson 4

e

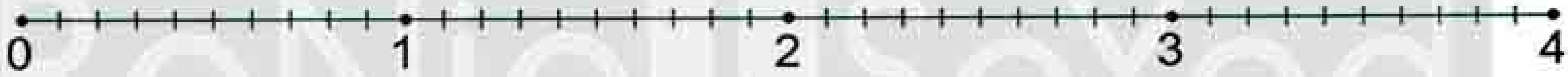


$\frac{26}{10}$

8 **Represent each of the following numbers on the number line :**

a 2.1 , 0.3 , 0.7 , 2.6 , 1.4

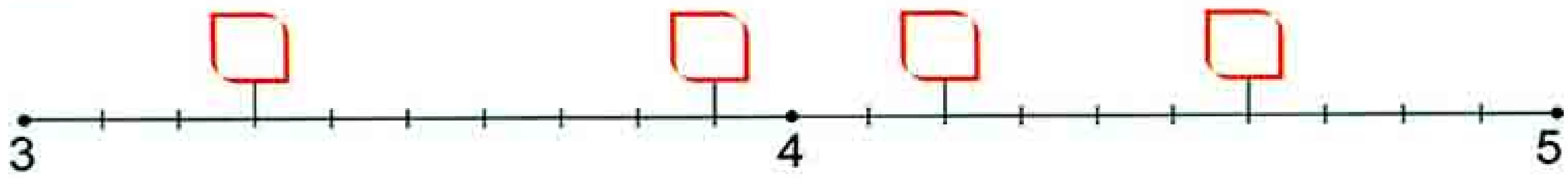
b 1.4 , 0.3 , 3.7 , 2.8 , 0.9 , 3.2



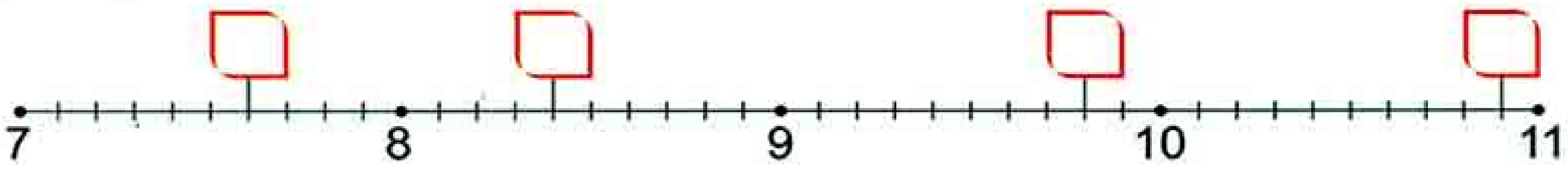
c $3\frac{2}{10}$, $1\frac{7}{10}$, $2\frac{9}{10}$, $\frac{3}{10}$, $1\frac{5}{10}$, $\frac{6}{10}$

9 **Write the suitable number according to its place on the number line in each of the following cases :**

a



b



c

10 **Complete the table as in the example :**

	Number	Hundreds	Tens	Units	Tenths
Ex	308.7	3	0	8	7
a	416.9	....	....	....	....
b	51.3	....	....	....	....
c	502.7	....	....	....	....
d	137	....	....	....	....
e	....	4	8	3	1
f	....	0	6	0	9
g	....	7	0	0	3

11 **Complete as in the example :**

Example

249.8 = 8 tenths + 9 units + 4 tens + 2 hundreds

a 756.2 = ... tenths + ... units + ... tens + ... hundreds

b 300.1 = ... tenth + ... units + ... tens + ... hundreds

c 57.3 = ... tenths + ... units + ... tens + ... hundreds

Lesson 4

d 197 = ... tenths + ... units + ... tens + ... hundreds

e .... = 1 tenth + 0 units + 4 tens + 0 hundreds

12 **Complete as in the example :**

Example

3.2 = 3 + 0.2

a 5.6 = 5 + ...

b 9.1 = ... + 0.1

c 8.3 = ... + 0.3

d 📖 7.2 = ... + 0.2

e 7.4 = ... + ...

f 📖 .... = 6 + 0.3

g .... = 38 + 0.6

h 📖 .... = 0.2 + 3

13 📖 **Complete as in the example :**

Example

0.3 + 0.7 = 1

a .... + 0.4 = 1

b 0.1 + ... = 1

c .... + 0.5 = 1

d .... + 0.2 = 1

e 0.1 + 0.2 + ... = 1

f 0.3 + 0.3 + ... = 1

g 0.4 + 0.3 + ... = 1

h 0.1 + 0.8 + ... = 1

14 **Underline the tens digit and circle the tenths digit in each of the following numbers as in the example :**

Example

5 $\underline{4}$ 2. ③

a 168.4

b 814.3

c 79.5

d 📖 100.1

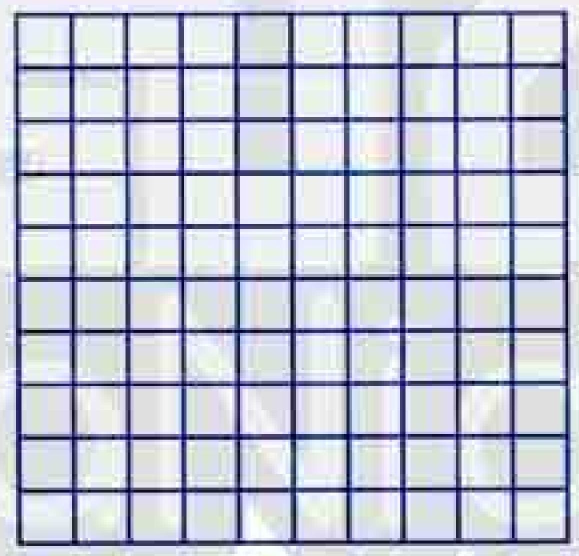
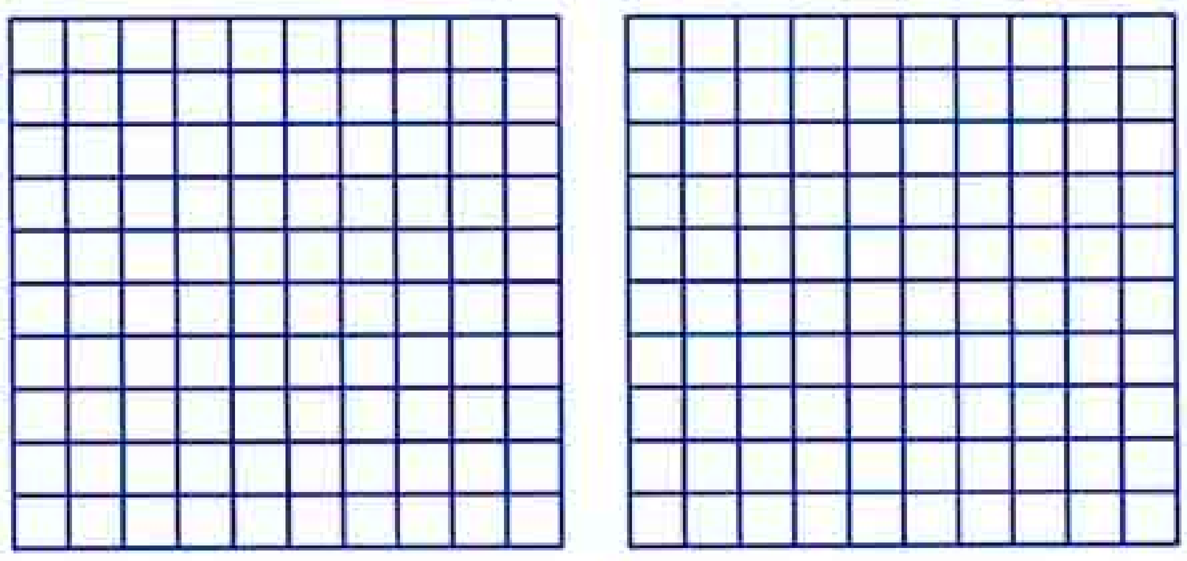
e 📖 2 060.9

f 📖 5 432.1

Lesson 5

More about decimal numbers

- Any fractions of a denominator 100 can be written as a decimal number as in the following examples :

Fractions	Written as	Read as
 $\frac{43}{100}$	0.43	Forty-three hundredths or zero point four three.
 $1\frac{4}{100}$	1.04	One and four hundredths or one point zero four.

Lesson 5

- **Also fractions of a denominator 1 000 can be written as a decimal number as in the following examples :**

* $\frac{542}{1000}$ = 0.542 and is read as five hundred forty-two thousandths or zero point five four two.

* $27\frac{35}{1000}$ = 27.035 and is read as twenty-seven and thirty-five thousandths or twenty seven point zero three five.

Remark 1

To convert an improper fraction of denominator 100 to a decimal, do as follows :

- $\frac{134}{100} = \frac{100}{100} + \frac{34}{100} = 1 + \frac{34}{100} = 1\frac{34}{100} = 1.34$
- $\frac{2\,013}{100} = \frac{2\,000}{100} + \frac{13}{100} = 20 + \frac{13}{100} = 20\frac{13}{100} = 20.13$

i.e. To convert an improper fraction of denominator 100 to a decimal, put a decimal point after 2 digits from the right.

Remark 2

To convert an improper fraction of denominator 1 000 to a decimal, do as follows :

- $\frac{1005}{1000} = \frac{1000}{1000} + \frac{5}{1000} = 1 + \frac{5}{1000} = 1\frac{5}{1000} = 1.005$
- $\frac{3\,507}{1000} = \frac{3000}{1000} + \frac{507}{1000} = 3 + \frac{507}{1000} = 3\frac{507}{1000} = 3.507$

i.e. To convert an improper fraction of denominator 1 000 to a decimal, put a decimal point after 3 digits from the right.

Converting fractions or mixed numbers to decimals

- To convert a fraction or a mixed number to a decimal, we try to make the denominator equal to 10 or 100 or 1 000 or ... etc.
- We can do that by multiplying or dividing both the denominator and the numerator by the same number as in the following example.

Example

Convert each of the following to the decimal form :

a $\frac{3}{20}$ **b** $\frac{21}{4}$ **c** $\frac{5}{8}$ **d** $\frac{32}{800}$ **e** $15\frac{14}{2\ 000}$

Solution

a $\frac{3}{20} = \frac{3 \times 5}{20 \times 5} = \frac{15}{100} = 0.15$

b $\frac{21}{4} = \frac{21 \times 25}{4 \times 25} = \frac{525}{100} = 5.25$

c $\frac{5}{8} = \frac{5 \times 125}{8 \times 125} = \frac{625}{1\ 000} = 0.625$

d $\frac{32}{800} = \frac{32 \div 8}{800 \div 8} = \frac{4}{100} = 0.04$

e $15\frac{14}{2\ 000} = 15\frac{14 \div 2}{2\ 000 \div 2} = 15\frac{7}{1\ 000} = 15.007$

The place value of decimals

I'm in the hundreds place.	I'm in the tens place.	I'm in the units place.	I'm the decimal point.	I'm in the tenths place.	I'm in the hundredths place.	I'm in the thousandths place.
2	4	9	.	5	7	3
My value is 200	My value is 40	My value is 9		My value is $\frac{5}{10}$	My value is $\frac{7}{100}$	My value is $\frac{3}{1\ 000}$

Exercise 5

More about decimal numbers

📖 From the school book

1 Write each of the following as a decimal number as in the example :

Example

- $5\frac{27}{100} = 5.27$
- $2\frac{5}{1\,000} = 2.005$

a $8\frac{27}{100}$ = ... b $\frac{7}{100}$ = ... c $\frac{25}{1\,000}$ = ...

d $26\frac{153}{1\,000}$ = ... e $8\frac{7}{100}$ = ... f $63\frac{17}{1\,000}$ = ...

g $3\frac{1}{100}$ = ... h $\frac{207}{100}$ = ... i $\frac{5\,004}{1\,000}$ = ...

2 Express each of the following decimal numbers by a fraction or a mixed number as in the example :

Example

- $5.11 = 5\frac{11}{100}$
- $12.017 = 12\frac{17}{1\,000}$

a 16.72 = ... b 📖 17.23 = ... c 125.174 = ...

d 0.65 = ... e 📖 6.09 = ... f 📖 5.017 = ...

g 📖 28.001= .... h 0.004 = ... i 17.17 = ...

3 Write each of the following decimal number as an improper fraction :

Example

- $3.24 = \frac{324}{100}$
- $4.005 = \frac{4\,005}{1\,000}$

a 4.53 = ... b 24.512 = ... c 0.507 = ...

d 2.001 = ... e 10.001 = ... f 47.47 = ...

4 Convert each of the following into a decimal form as in the example :

Example

- $\frac{9}{50} = \frac{9 \times 2}{50 \times 2} = \frac{18}{100} = 0.18$
- $2\frac{6}{200} = 2\frac{6 \div 2}{200 \div 2} = 2\frac{3}{100} = 2.03$

a $\frac{3}{50}$ = ... = ... = ...

b $13\frac{8}{25}$ = ... = ... = ...

c $108\frac{1}{4}$ = ... = ... = ...

d 📖 $7\frac{1}{20}$ = ... = ... = ...

e 📖 $26\frac{1}{25}$ = ... = ... = ...

f $127\frac{16}{800}$ = ... = ... = ...

g $\frac{187}{250}$ = ... = ... = ...

h $\frac{37}{500}$ = ... = ... = ...

i $18\frac{21}{70}$ = ... = ... = ...

j 📖 $\frac{14}{2\,000}$ = ... = ... = ...

k 📖 $\frac{1\,002}{300}$ = ... = ... = ...

Remember that :

- $2 \times 5 = 10$
- $2 \times 50 = 100$
- $2 \times 500 = 1\,000$
- $5 \times 20 = 100$
- $5 \times 200 = 1\,000$
- $4 \times 25 = 100$
- $4 \times 250 = 1\,000$
- $25 \times 40 = 1\,000$
- $8 \times 125 = 1\,000$

5 Write in digits each of the following numbers as in the example :

Example

One hundred , forty-seven and twenty five hundredths ⟶ 147.25

a Six and two hundredths ⟶ ....

b Three hundred thousandths ⟶ ....

c Twenty two and thirty-five hundredths ⟶ ....

d Nine hundredths ⟶ ....

Lesson 5

e One hundred and forty-nine thousandths ⟶ ....

f Eleven thousandths ⟶ ....

g Forty-four and four thousandths ⟶ ....

---

6 **Express in words each of the following numbers as in the example :**

Example

4.571 ⟶ Four and five hundred seventy one thousandths.

a 0.35 ⟶ ....

b 9.73 ⟶ ....

c 49.347 ⟶ ....

d 2.09 ⟶ ....

e 0.318 ⟶ ....

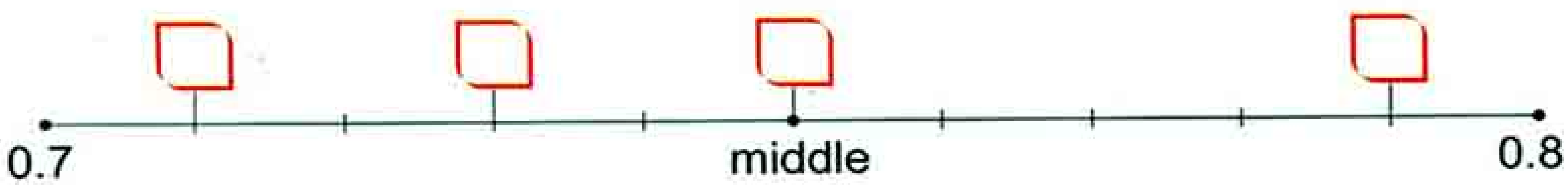
f 64.075 ⟶ ....

g 125.007 ⟶ ....

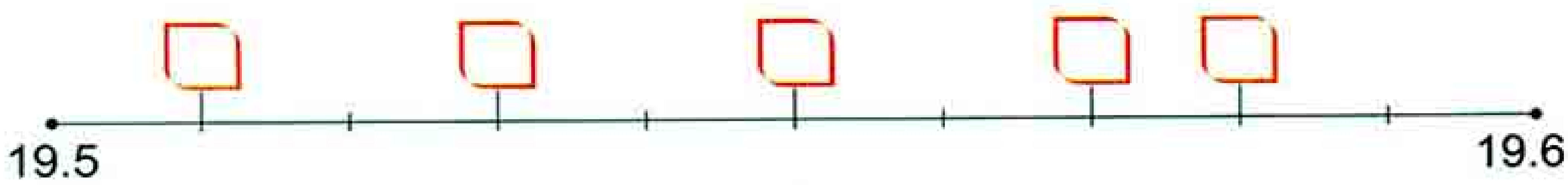
---

7 **Write the suitable number inside each rectangle according to its place on the number line :**

a 📖 0.75 , 0.79 , 0.73 , 0.71



b 19.57 , 19.53 , 19.58 , 19.51 , 19.55

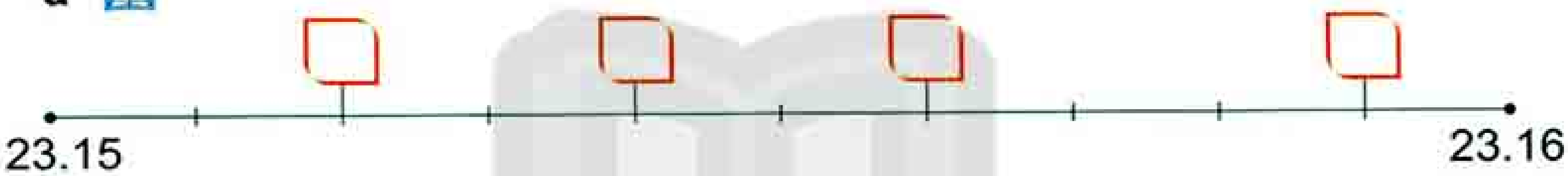


c 5.378 , 5.376 , $5\frac{3}{8}$, 5.374 , 5.372

---

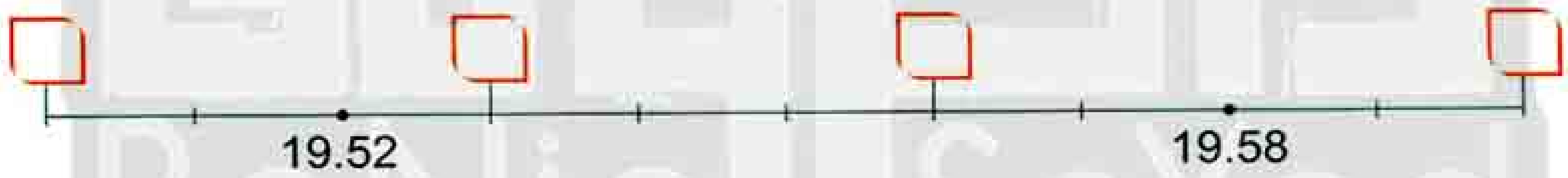
8 **Write the suitable number inside each rectangle according to its place on the number line :**

a



b

c



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9 **Complete the following table as in the example :**

	Number	Hundreds	Tens	Units	Tenths	Hundredths	Thousandths
Ex	234.706	2	3	4	7	0	6
a	416.139	…………	…………	…………	…………	…………	…………
b	629.041	…………	…………	…………	…………	…………	…………
c	70.287	…………	…………	…………	…………	…………	…………
d	906.57	…………	…………	…………	…………	…………	…………
e	…………	9	0	1	4	3	
f	…………		5	0	0	1	8
g	318	…………	…………	…………	…………	…………	…………

Lesson 5

10 Underline the units digit and circle the hundredths digit in each of the following numbers as in the example :

Example

24.1⑧7

a 741.357 b 4.503 c 62.35

d 0.241 e 23.034 f 0.104

g 604.16 h 0.004 i 220.13

---

11 Write the value of the underlined digit in each of the following numbers as in the example :

	Number	The value of the underlined digit
Ex	761.284	$\frac{8}{100}$
a	290.681	....
b	604.571	....
c	522.109	....
d	614.837	....
e	310.208	....
f	480.093	....

12 Complete as in the example :

Example

74.531
74 + 0.531
74 + 0.5 + 0.03 + 0.001

a

8.746

b

25 + 0.691

c

103 + 0.1 + 0.002

13 Choose the correct answer :

a $5\frac{3}{100}$ = ... (5.3 or 5.03 or 3.5 or 5.30)

b $3.017 = 3\frac{\cdots\cdots}{\cdots\cdots}$ ($\frac{17}{10}$ or $\frac{17}{100}$ or $\frac{17}{1\,000}$ or $\frac{7}{1}$)

c The value of 5 in 6.325 is .... (5 or $\frac{5}{10}$ or $\frac{5}{100}$ or $\frac{5}{1\,000}$)

d The place value of 5 in the number 12.358 is ....

(tenths or tens or hundreds or hundredths)

e Five hundred, fifty and five thousandths = ...

(5.505 or 55.05 or 550.05 or 550.005)

f Fifteen hundredths = ... (150 or 0.015 or 0.15 or 1.5)

g 45 tenths = ... (4.5 or 0.45 or 450 or 4.05)

14 I am an improper fraction, when you convert me into a decimal number, my whole part is 2, my decimal part consists of 3 digits. The hundredths digit is 6, the thousandths digit is 4 and the sum of my all digits is 15, find me.

Lesson 6

Comparing two decimal numbers and ordering a set of decimal numbers

Preface

First Any mixed number is included between two whole numbers

For Example

- 5.34 is included between 5 and 6

i.e. $5 < 5.34 < 6$

- 0.24 is included between 0 and 1

i.e. $0 < 0.24 < 1$

Second There is an infinite number of decimals between any two numbers

For Example

There are many numbers that lie between 13 and 14 such as :

13.1 , 13.2 , 13.3 , 13.45 , 13.967 , ... etc.

Third If we put zeroes to the right of a decimal, then its value does not change

For Example

- 0.25 = 0.250 = 0.2500 = ... etc.
- 1.3 = 1.30 = 1.300 = ... etc.

Comparing two decimal numbers

Example

To compare 2.135 and 2.137, follow the following steps :

Step 1	Step 2	Step 3	Step 4
Compare the units.	Compare the tenths.	Compare the hundredths.	Compare the thousandths.
2.135 ↓ 2.137	2.135 ↓ 2.137	2.135 ↓ 2.137	2.135 ↓ 2.137
the same number of units	the same number of tenths	the same number of hundredths	5 < 7

So, 2.135 < 2.137

Ordering a set of decimal numbers

Example

To order the following decimals 0.402 , 0.42 , 0.375 , 1.2 and 0.85 from the greatest to the smallest, follow the following steps :

Put the decimals under each other as follows putting zeroes in the empty places to the right of the decimals :

Units	Decimal point	Tenths	Hundredths	Thousandths
0	•	4	0	2
0	•	4	2	0
0	•	3	7	5
1	•	2	0	0
0	•	8	5	0

Lesson 6

Compare the units	There is a 1, all the rest are 0 , so 1.2 must be the greatest.
Compare the tenths	The 8 is highest, so 0.85 is the next.
There are two numbers with the same "Tenths" value of 4, so move to the "Hundredths" column.	One number has a 2 in the hundredths, and the other has a 0, so the 2 wins. So, 0.42 is greater than 0.402
Go back to comparing the Tenths	0.375 must be the last

So, The order from the greatest to the smallest is :

1.2 , 0.85 , 0.42 , 0.402 , 0.375

Exercise 6

Comparing two decimal numbers and ordering a set of decimal numbers

From the school book

1 Complete with suitable whole numbers as in the example :

Example

25 < 25.147 < 26

a .... < 24.9 < ....

b .... < 20.40 < ....

c .... < 754.25 < ....

d .... < 0.92 < ....

e .... < 6.542 < ....

f .... < 15.04 < ....

g .... < 208.5 < ....

h .... < 400.003 < ....

2 Mention 4 numbers between each of the following :

a 0.7 and 0.8

b 17 and 18

c 12.1 and 12.2

d 400.23 and 400.24

e 14.9 and 15

f 0.09 and 0.1

3 Which of the numbers inside the opposite rectangle lies :

a between 17 and 18 ? ....

b between 34 and 34.5 ? ....

c between 33 and 35 ? ....

d between 17 and 17.5 ? ....

e between 17 and 17.1 ? ....

f between 34 and 34.1 ? ....

34.2	34.07	17.03	17.019	34	17.7

Lesson 6

4 **Put the suitable relation (< , > or =) :**

a 0.6 ☐ 0.3

b 0.05 ☐ 0.09

c 0.35 ☐ 0.5

d 0.96 ☐ 0.69

e 0.435 ☐ 0.534

f 0.04 ☐ 0.40

g 0.41 ☐ 0.389

h 📖 5.6 ☐ 5.60

i 📖 0.92 ☐ 1.02

j 1 ☐ 0.999

k 📖 3.14 ☐ 3.2

l 9.06 ☐ 9.5

m 23.605 ☐ 23.65

n 7.1 ☐ 7.09

o 7 ☐ 1.7

p 📖 28.4 ☐ 2.84

q 15.428 ☐ 15.43

r 100 ☐ 99.999

s $2\frac{1}{4}$ ☐ 2.23

t 📖 1.75 ☐ $1\frac{3}{4}$

u $1\frac{1}{2}$ ☐ 1.05

v $3\frac{3}{4}$ ☐ 3.57

w $3\frac{7}{25}$ ☐ 37.25

x 8 + 0.2 + 0.06 ☐ 8.260

y 3 tenths ☐ 30

z 54 tenths ☐ 54 hundredths

5 📖 **Which is greater :**

a 16.3 or 6.63 ?

b 5.07 or 6 ?

c 3.24 or 3.42 ?

d 29.15 or 29.5 ?

6 📖 **Which is smaller :**

a 3.5 or 3.05 ?

b 14.7 or 9.47 ?

c 27 or 23.9 ?

d 0.76 or 0.9 ?

7 **Arrange the following numbers in an ascending order :**

a 7.5 , 7.30 and 7.25

The order is : .... , ... and ....

b 0.45 , 0.70 and 0.42

The order is : .... , ... and ....

c 5.8 , 5.08 , 58 and 8.5

The order is : .... , ... , ... and ....

d 75.12 , 75.2 , 75.102 and 75.24

The order is : .... , ... , ... and ....

e 157 , 152.3 , 152.13 and 157.1

The order is : .... , ... , ... and ....

f 0.3 , 0.003 , 0.033 and 0.32

The order is : .... , ... , ... and ....

g 98.76 , 7.395 , 210.8 , 83.624 , 300.1 and 82

The order is : .... , ... , ... , ... , ... and ....

h $6\frac{1}{4}$, 6.2 , 6.3 and 6.35

The order is : .... , ... , ... and ....

i $\frac{11}{25}$, $\frac{3}{5}$, 0.4 and 0.06

The order is : .... , ... , ... and ....

j 3.08 , $3\frac{1}{4}$, 3 tenths and $3\frac{1}{2}$

The order is : .... , ... , ... and ....

Lesson 6

8 **Arrange the following numbers in a descending order :**

a 5.58 , 5.5 , 5.85 and 5.7

The order is : ………… , ………… , ………… and …………

b 0.804 , 0.84 , 0.85 and 0.084

The order is : ………… , ………… , ………… and …………

c 5.63 , $5\frac{36}{100}$, 500.36 and 5.063

The order is : ………… , ………… , ………… and …………

d $\frac{1}{2}$, 0.05 , $\frac{1}{4}$ and 0.025

The order is : ………… , ………… , ………… and …………

e $6\frac{1}{8}$, 6.0125 , 6.15 and 6.152

The order is : ………… , ………… , ………… and …………

f $1\frac{1}{5}$, $1\frac{1}{10}$, 13 tenths and 1.5

The order is : ………… , ………… , ………… and …………

---

9 **Use the numbers : 1.3 , 3.2 , 10.04 , 3.12 , 3.215 and 1.12 to complete the following :**

a The numbers that are greater than 3 are ……………………

b The numbers that are smaller than 3 are ……………………

c The smallest number is ……………………

d The greatest number is ……………………

e The numbers that are included between 1 and 3 are ……………………

f The numbers that are included between 2 and 4 are ……………………

g The numbers that are included between 3.15 and 3.25 are ……………………

h The order of the numbers in an ascending order is ……………………

10 Underline the equal numbers in each of the following groups :

a 18.04 , 18.40 , 18.040, 18.44 and 1.840

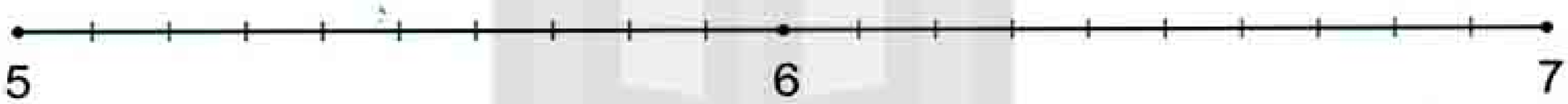
b 0.10 , 10.1 , 0.01 , 0.001 and 0.1

c 5.73 , 5.703 , 5.730 , 5.073 , 5.073 and 50.73

d 9.07 , 9.7 , 9.700 , 9.007 and 90.07

11 Write the following numbers in their suitable places on the number line, then arrange them ascendingly :

a 5.5 , 6.3 , 6.7 , 5.2 and 5.9



The order is : .... < .... < .... < .... < ....

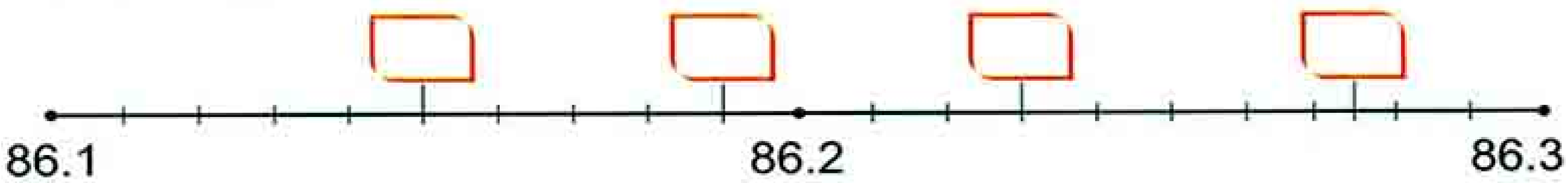
b 3.98 , 3.82 , 3.95 , 3.87 and 3.85

The order is : .... < .... < .... < .... < ....

c 17.5 , 16.15 , 17.25 and 16.6

The order is : .... < .... < .... < ....

12 Write suitable numbers inside the rectangles, then arrange them descendingly :



The order is : .... > .... > .... > ....

Test on the first part of unit one

(from lesson 1 to lesson 6)

1 Choose the correct answer from the given ones :

1. Five and seven tenths = ... (7.5 or 5.7 or 0.57 or 0.75)
2. The place value of the digit 5 in the number 9.56 is ....
   (units or tens or tenths or hundredths)
3. $\frac{18}{4}$ = ... ($4\frac{1}{2}$ or $4\frac{2}{3}$ or $4\frac{3}{5}$ or $4\frac{2}{5}$)
4. 0.017 is less than .... (0.009 or 0.014 or 0.012 or 0.051)
5. $\frac{1}{4} + \frac{3}{4}$ = ... (1 or $\frac{4}{8}$ or $\frac{4}{6}$ or $\frac{3}{8}$)
6. 6.48 = 6 + ... + 0.08 (4 or 0.4 or 0.04 or 40)
7. $\frac{5}{7} = \frac{15}{\text{..............}}$ (3 or 20 or 21 or 25)
8. 2.09 .... 2.9 (> or = or <)
9. 0.7 + ... = 1 (0.3 or 0.4 or 0.6 or 0.5)
10. The decimal between 0.4 and 0.43 is ....
    (0.49 or 0.59 or 0.23 or 0.42)

2 Complete each of the following :

11. The value of the digit 6 in the number 18.36 is ....
12. $7\frac{3}{5}$ = ... (in decimal form)
13. $\frac{2}{5} + \frac{3}{8}$ = ...
14. $1\frac{3}{4} - \frac{6}{7}$ = ...
15. The number 2.9 in letters is ....
16. $\frac{24}{36} = \frac{\text{..............}}{\text{..............}}$ (in the simplest form)

3 Answer the following :

17 Arrange the following numbers in a descending order :

5.8 , 5.08 , 58 and 8.5

The order is : …………… , …………… , …………… and ……………

18 Write four decimal numbers included between 17 and 18

The numbers are : …………… , …………… , …………… and ……………

19 Arrange the following in an ascending order :

$$\frac{2}{3} \ , \ \frac{3}{8} \ , \ \frac{1}{6} \ \text{and} \ \frac{5}{12}$$

The order is : …………… , …………… , …………… and ……………

20 Bassem bought a pen for L.E. $3\frac{1}{2}$ and a ruler for L.E. $1\frac{1}{4}$

How much money did he pay ?

He paid = …………………………………………………… = L.E. ……………

Lesson 7

Operations on decimal numbers

First Adding and subtracting decimal numbers

Follow the following steps to add (or subtract) decimal numbers :

1. Put the decimal points under each other.
2. Put zeroes to the right of the last decimal digit so that each number has the same number of digits after the decimal point.
3. Add or subtract by starting from the right to the left.

Example 1

Add the following :

a 3.13 + 5.49 **b** 127.3 + 16.45 **c** 14.72 + 7.5 + 0.231

Solution

a

$$\begin{array}{r} \scriptstyle 1 \\ 3.13 \\ +\ 5.49 \\ \hline 8.62 \end{array}$$

b

$$\begin{array}{r} \scriptstyle 1 \\ 127.30 \\ +\ 16.45 \\ \hline 143.75 \end{array}$$

c

$$\begin{array}{r} \scriptstyle 1\ 1 \\ 14.720 \\ +\ 7.500 \\ +\ 0.231 \\ \hline 22.451 \end{array}$$

Notice that :
We can add the decimal numbers horizontally.

Example 2

Add the following :

a 0.21 + 0.575

b 213.01 + 27.992

Solution

a 0.210 + 0.575 = 0.785

b 213.010 + 27.992 = 241.002

Example 3

Subtract the following :

a 5.43 – 2.21

b 8.6 – 6.51

c 20 – 11.624

Solution

a
$$\begin{array}{r} 5.43 \\ -\ 2.21 \\ \hline 3.22 \end{array}$$

b
$$\begin{array}{r} 8.60 \\ -\ 6.51 \\ \hline 2.09 \end{array}$$

c
$$\begin{array}{r} 20.000 \\ -\ 11.624 \\ \hline 8.376 \end{array}$$

Example 4

Subtract the following :

a 2.325 – 0.214

b 12.78 – 3.5

Solution

a 2.325 – 0.214 = 2.111

b 12.78 – 3.50 = 9.28

Lesson 7

Second Dividing a whole number by 10 , 100 and 1000

Example

a $63 \div 10 = \frac{63}{10} = \frac{60}{10} + \frac{3}{10} = 6 + 0.3 = 6.3$

b $572 \div 100 = \frac{500}{100} + \frac{72}{100} = 5 + 0.72 = 5.72$

c $2\,485 \div 1\,000 = \frac{2\,000}{1\,000} + \frac{485}{1\,000} = 2 + 0.485 = 2.485$

• **From the previous example , we can deduce that :**

1. When we divide a whole number by 10, we put a decimal point after 1 digit from the right.	**Example** * 27 ÷ 10 = 2.7 * 128 ÷ 10 = 12.8
2. When we divide a whole number by 100, we put a decimal point after 2 digits from the right.	**Example** * 728 ÷ 100 = 7.28 * 5240 ÷ 100 = 52.40
3. When we divide a whole number by 1000, we put a decimal point after 3 digits from the right.	**Example** * 7 496 ÷ 1 000 = 7.496 * 97 875 ÷ 1 000 = 97.875

Exercise 7 Operations on decimal numbers

📖 From the school book

1 Find the result of each of the following :

a 0.231 + 0.754	b 2.53 + 0.19	c 0.689 − 0.254 ....
d 📖 3218.975 − 218.853	e 12.2 + 21.6	f 📖 74.28 + 25.72 ....
g 53.42 − 21.23	h 16.34 + 8.79	i 7.51 + 6.492 ....
j 📖 666.66 − 549.958	k 📖 967.63 + 91.2	l 92.07 − 45.026 ....
m 0.2 + 0.987	n 📖 289.007 + 14.43	o 68.005 − 24.25 ....
p 0.5 − 0.375	q 612.5 − 157.125	r 35.001 + 14.999 ....

Lesson 7

s
$$\begin{array}{r} 8.974 \\ +\ 1.237 \\ \hline \dots\dots \end{array}$$

t
$$\begin{array}{r} 36.752 \\ -\ 8.491 \\ \hline \dots\dots \end{array}$$

u
$$\begin{array}{r} 72.1 \\ -\ 9.865 \\ \hline \dots\dots \end{array}$$

v
$$\begin{array}{r} 27.34 \\ -\ 9 \\ \hline \dots\dots \end{array}$$

w
$$\begin{array}{r} 87 \\ -\ 6.319 \\ \hline \dots\dots \end{array}$$

x
$$\begin{array}{r} 4.15 \\ +\ 8.6 \\ +\ 9.283 \\ \hline \dots\dots \end{array}$$

y
$$\begin{array}{r} 115.402 \\ +\ 803.1 \\ +\ 27.86 \\ \hline \dots\dots \end{array}$$

z
$$\begin{array}{r} 21.4 \\ +\ 87.8 \\ +\ 30.934 \\ \hline \dots\dots \end{array}$$

2 **Find the result of each of the following :**

a 14.63 + 34.25 = ...

b 17.3 + 4.6 = ...

c 2.536 – 1.203 = ...

d 0.875 + 0.43 = ...

e 2.65 + 9.3 = ...

f 89.75 – 4.34 = ...

g 2.536 – 0.203 = ...

h 5.42 – 3.362 = ...

i 72.7 + 65.31 = ...

j 381.5 + 76.53 = ...

k 14.78 – 2.5 = ...

l 30.33 – 3.3 = ...

m 7.7 + 8.005 = ...

n 22.3 – 11.415 = ...

o 271.306 + 3.5 = ...

p 205.7 – 99.103 = ...

q 1.007 + 9 = ...

r 13 + 2.65 = ...

s 48.005 – 24.25 = ...

t 100 – 47.85 = ...

u $17.007 - 12.07 =$ ....

v 📖 $213.01 + 27.99 =$ ....

w $11\frac{1}{4} + 12.179 =$ ....

x $\frac{1}{8} + 0.13 =$ ....

y $9\frac{113}{1\,000} - 7\frac{1}{4} =$ ....

z $36\frac{2}{5} - 17.15 =$ ....

3 Find the result of each of the following :

a $87 \div 10 =$ ....

b $420 \div 10 =$ ....

c $489 \div 10 =$ ....

d $754 \div 100 =$ ....

e $7\,521 \div 1\,000 =$ ....

f $6\,280 \div 100 =$ ....

g $7\,001 \div 10 =$ ....

h $99\,675 \div 1\,000 =$ ....

i $583\,001 \div 100 =$ ....

j $6\,104\,826 \div 10 =$ ....

k $4\,250 \div 1\,000 =$ ....

l $7\,800 \div 1\,000 =$ ....

m $425\,000 \div 1\,000 =$ ....

n $777\,600 \div 100 =$ ....

4 Find the result of each of the following :

a $37.42 + 43.01 + 19.15 =$ ....

b 📖 $28.65 + 17.3 + 2.05 =$ ....

c $51.7 + 48.004 + 48.59 =$ ....

d $6 + 3.65 + 4.912 =$ ....

e 📖 $53.245 + 1.97 + 213.8 =$ ....

f $2.009 + 3.091 + 4.91 =$ ....

g $900.333 + 90.222 + 9.445 =$ ....

h 📖 $12.7 + 10.007 + 3.07 =$ ....

Lesson 7

i $5.27 + 8.39 - 3\frac{14}{100} =$ ....

j 📖 $512 + 88.35 - 67.035 =$ ....

k 📖 $(24.235 + 0.065) - (17 + 1.3) =$ ....

l $(32.57 - 12.32) + (75.6 - 12.48) =$ ....

m 📖 $(520.46 - 2.731) - (498.7 - 98.58) =$ ....

n 📖 $(83.57 - 14.451) + (218.6 - 100.58) =$ ....

o 📖 $(23\,456 \div 10) + (23\,456 \div 100) =$ ....

p $11.35 - (5.6 + 4.5) - (75 \div 1\,000) =$ ....

q $39.071 - \left(16\frac{1}{4} + 22\frac{1}{5}\right) =$ ....

---

5 **Complete :**

a $1.6 +$ .... $= 9.6$

b .... $+ 3.9 = 6.5$

c $36.47 +$ .... $= 52.03$

d 📖 .... $+ 54.8 = 77.59$

e .... $+ 125.125 = 200.5$

f 📖 $47.85 +$ .... $= 100$

g $6.27 -$ .... $= 3.286$

h .... $- 3\frac{3}{5} = 7.634$

i 📖 $33.3 -$ .... $= 12.008$

j 📖 .... $- 41.41 = 3.8$

k .... $- 43.792 = 61.379$

l $4\,453 \div$ .... $= 44.53$

m .... $\div 1\,000 = 67\frac{2}{10}$

n $4.76 = 4 + 0.7 +$ ....

o $5\,028 \div$ .... $= 50.28$

p $12 \div$ .... $= 0.012$

6 Choose the correct answer :

a $5.4 + 3.04 =$ .... (84.4 or 8.44 or 0.844)

b 📖 $4.7 + 3.07 =$ .... (7.14 or 8.4 or 7.77)

c $0.04 + 0.4 =$ .... (0.44 or 0.08 or 0.008)

d $361 \div 100 =$ .... (36.1 or 3.61 or 36 100)

e 📖 $9\,870 \div 100 =$ .... (98.7 or 9.87 or 987)

f $4.619 - 3.7 =$ .... (0.999 or 0.199 or 0.919)

g 📖 $137.234 - 37.04 =$ .... (133.530 or 100.194 or 100.230)

h $3 + 0.3 + 0.003 =$ .... (3.33 or 3.303 or 0.333)

i $2.714 +$ .... $= 5$ (2.286 or 22.86 or 2.276)

j .... $\div 100 = 0.6$ (0.06 or 0.6 or 60)

k $140 \div 1\,000 =$ .... (14 or 1.4 or 0.14)

l 📖 540 piasters = ... pounds (5.4 or 54 or 0.54)

m 2 356 gm. = ... kg. (23.56 or 2.356 or 235.6)

n $\frac{1}{8} + 4.125 =$ .... (4.25 or 0.45 or 0.045)

o 📖 $256.104 = 256 + 0.1 +$ .... (0.04 or 0.4 or 0.004)

p $3.8 + 4\frac{1}{2}$ .... 8.3 (< or = or >)

q $13 - 3\frac{2}{5} =$ .... (9.6 or 9.4 or 9)

7 Put the suitable relation (< , = or >) :

a $1.7 + 0.7$ ☐ $3 + 0.5$

b 📖 $7.9 + 2.3$ ☐ $11.7 - 1.3$

c $0.5 + 0.99$ ☐ $0.99 + 5$

d $3.1 + 4.18$ ☐ $9.5 - 4.32$

Lesson 7

e 1.471 – 0.53 ☐ 0.951

f 1.54 ☐ 154 ÷ 10

g 7.32 – 1.93 ☐ 6.78 – 0.42

h 7.44 dm^2 ☐ 744 cm^2

i 614 gm. ☐ 6.14 kg.

j 📖 58.003 – 57.03 ☐ 1 + 0.973

k 📖 99.89 – 90.09 ☐ 10 – 1.01

l 📖 520.46 + 0.73 ☐ 520 + 1.19

m $25\frac{3}{5}$ – 19.15 ☐ 6.45

n 📖 4.722 ☐ 8 – 3.228

o 📖 6.18 + 3.82 ☐ 87.56 – 77.5

p 📖 175 ÷ 100 ☐ 175 ÷ 1 000

q 📖 1.75 ☐ $1\frac{3}{4}$

r 📖 785 ÷ 10 ☐ 8 000 ÷ 100

s 324.007 + 25.06 ☐ 75.78 + 275.1

t 25.25 + 25 ☐ 50.75 – (25 ÷ 100)

8 Put (✓) for the correct statements and (×) for the incorrect ones :

a 5 604 ÷ 100 = 5.604 ( )

b 4.761 – 3.009 = 1.752 ( )

c 7.641 + 3.942 = 1.1583 ( )

d 📖 4.256 + 4.4 = 8.260 ( )

e 📖 19.07 – 8.007 = 7.063 ( )

f 1.07 + 0.7 = 1.77 ( )

g 📖 4.075 = 4 + 0.7 + 0.005 ( )

h $64 \div 1\,000 = 0.64$ ( )

i $0.1 + 0.001 + 0.01 = 0.111$ ( )

j $2\frac{1}{8} + 7.875 = 10$ ( )

k $8.8 - 8.08 =$ zero ( )

l $18.007 - 15.7 = 3$ ( )

m $36.4 - 22.25 = 14.15$ ( )

n $3.71 + 6.92 = 10.33$ ( )

o $63 - 19.42 = 54.78$ ( )

p $9.63 + 1.94 > 10.5$ ( )

q $4\frac{3}{4}$ pounds = 475 piastres ( )

r 8 thousandths + 3 tenths = 0.38 ( )

s $\frac{1}{2} + 0.05 = 1$ ( )

9 **Complete the missing digits :**

a
```
    3 . □ 7
+   6 . 5 □
-----------
    □ . 8 9
```

b
```
    1 . □ 6
+   3 . 3 □
-----------
    □ . 3 3
```

c
```
    3 . 2 □
+   5 . □ 3
-----------
    □ . 7 3
```

d
```
      9 7 . 4 8
+     4 3 . □ □
---------------
    □ □ □ . 9 3
```

e
```
    3 4 . 4 2
+   □ □ . □ □
-------------
    9 4 . 6 5
```

f
```
    2 5 . 4 8 6
-   □ □ . □ □ □
---------------
    1 2 . 1 3 0
```

Lesson 7

g

```
    5 . 6 9
 −  4 . □ □
 ----------
    □ . 4 5
```

h

```
    9 . 5 1 □
 −  □ . □ □ 1
 ------------
    4 . 2 4 2
```

i 📖

```
    8 3 . 5 7
 −  □ □ . 7 3 4
 --------------
    2 4 . □ □ □
```

j 📖

```
    1 1 3 . 5 7 □
 −    1 3 . □ □ 8
 ----------------
    □ □ □ . 1 7 □
```

k

```
    5 . □ 8 □
 −  1 . 4 1 3
 ------------
    □ . 3 □ 7
```

l 📖

```
    2 9 9 . □ □ □
 −    □ □ . 4 5 7
 ----------------
    2 4 3 . □ 3 □
```

Real Life Problems

Example

Soha saved L.E. 17.25 and her brother Amgad saved L.E 8.5

Find the sum they saved.

The sum they saved = 17.25 + 8.5

= L.E. 25.75

a Hany bought a pair of trousers for L.E. 75.75 and a pair of shoes for L.E. 49.5

How much money did Hany pay ?

What Hany paid = ... + ...

= L.E. ....

Unit One

b If Mona has L.E. 3.95 and Manal has L.E. 6.3

How much do they have together ?

....

c A man bought some goods for L.E. 306.7

and sold them for L.E. 366.95 Find his profit.

....

d Ibrahim had L.E. 53.75 He spent L.E. 35.05

Find the remainder with him.

....

....

....

....

e Mai had L.E. 253 She bought a dress for

L.E. 125.7 and some books for L.E. 37.95

How much money is left with her ?

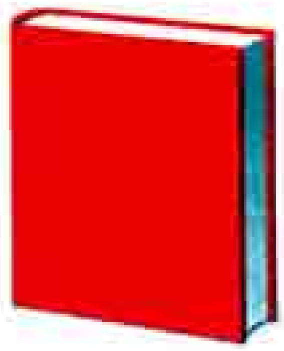
....

....

f 📖 Mazen has 35 pounds. He bought a ball

for L.E. 9.75 and a book for P.T. 840

How much money was left with Mazen?



....

....

Lesson 7

g Ali has L.E. 24.75 and Ahmed has L.E. $15\frac{1}{4}$

Find how much money Ali and Ahmed have together.

....

....

h 🕮 Hossam has P.T. 425 and his sister Hend has P.T. 980 piastres.Find the difference between what they have in pounds.

....

i 🕮 Hanaa has 200 pounds. She wants to buy a pair of shoes for L.E. 99.8 , a bag for L.E. 45.75 and a dress for L.E. 70.25

Can she buy all what she wants ? Why ?

....

....

j 🕮 A man bought three metres of cloth to make two shirts, one for him and another for his son. If you know that one metre and three quarters of a metre of cloth are needed for the man's shirt and one metre and half a metre for the son's shirt, answer the following questions :

a. Is what the man bought enough to make the two shirts or will he need another piece of cloth ?

....

b. If he needs another piece of cloth, how much cloth will he need to buy ?

....

Lesson **8A**

Approximating to the nearest ten

The meaning of approximation

In our daily life , we use the word "approximation" as the following :

- If the distance between Cairo and Aswan is 895 km., then we say that the distance between Cairo and Aswan is approximately 900 km.

- If the price of a pair of shoes is L.E. 44.75, then we say that the price of the pair of shoes is approximately L.E. 45

- When a boy is 7 years and 10 months old, he says that he is approximately 8 years old.

This explains the meaning of approximation.

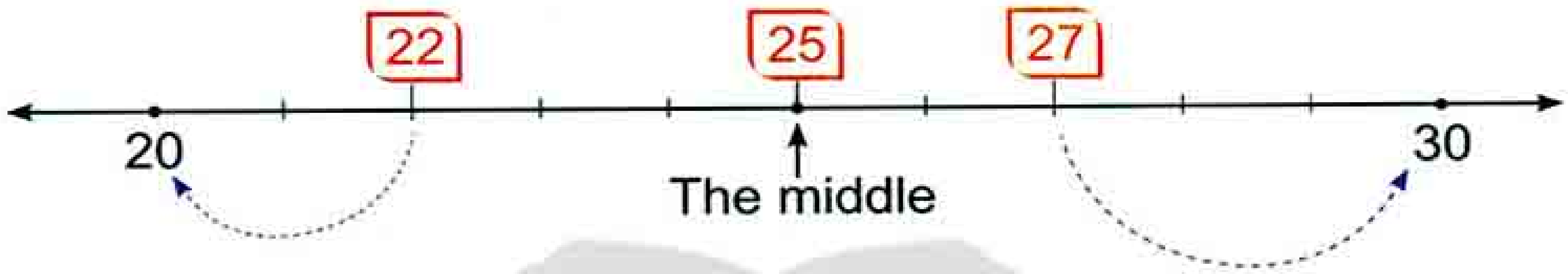
Remarks

1. Approximation means replacing the exact number by another simpler number , near to the exact number.
2. The symbol (≃) "approximately equal" denotes approximation.

Lesson 8A

Approximating to the nearest ten

If we determine the positions of the numbers 22 , 27 and 25 on the following number line we will find that :



- The number 22 is nearer to 20 than to 30 and we notice that 20 is the nearest perfect ten to 22 , it is written as : $22 \simeq 20$ (to the nearest ten)

  and it is read as : 22 approximately equals 20 to the nearest ten

- The number 27 is nearer to 30 than to 20 and we notice that 30 is the nearest perfect ten to 27 , it is written as : $27 \simeq 30$ (to the nearest ten)

  and it is read as : 27 approximately equals 30 to the nearest ten

- The number 25 is in the middle between 20 and 30 , it is agreed that it is approximated to the greater number.

i.e. $25 \simeq 30$ (to the nearest ten)

Rule

To approximate to the nearest ten, do as follows :

1. If the units digit is less than 5 (4 , 3 , 2 , 1 or 0) , then replace it by zero and keep the other digits as they are with removing the decimal part if it exists.

For example :

- $5\,724 \simeq 5\,720$
- $341.4 \simeq 340$

2. If the units digit is equal to 5 or more (5 , 6 , 7 , 8 or 9) , then replace it by zero , add one to the tens digit and also keep the other digits as they are with removing the decimal part if it exists.

For example :

- 7 425 ≃ 7 430
- 287.2 ≃ 290

Example

Approximate each of the following to the nearest ten :

a 45

b 186

c 5 432

d 123.2

e 97.8

f $25\frac{1}{2}$

Solution

a 45 ≃ 50

b 186 ≃ 190

c 5 432 ≃ 5 430

d 123.2 ≃ 120

e 97.8 ≃ 100

f $25\frac{1}{2} = 25.5 \simeq 30$

Remark

From the previous example we notice that :

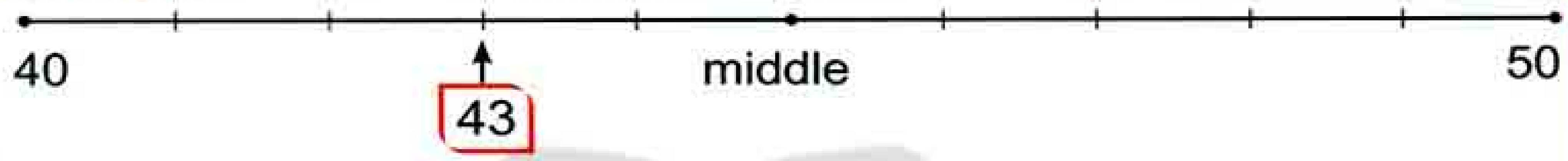
When approximating to the nearest ten , the results is perfect tens as : 50 , 190 , 5 430 , ...

Exercise 8 Approximating to the nearest ten

From the school book

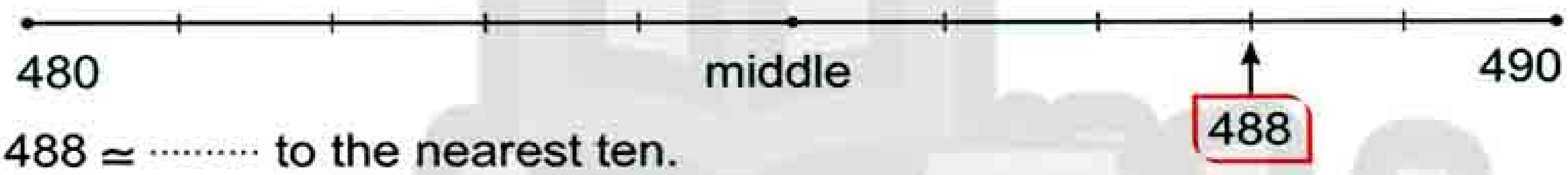
1 Notice the position of each of the following numbers on the number line, then complete as in the example :

Example



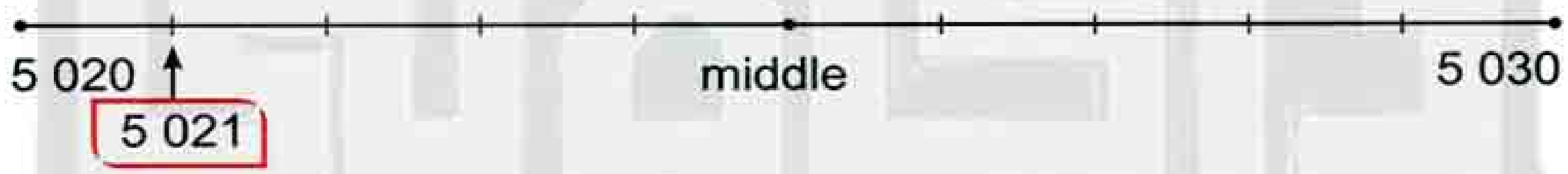
43 ≃ 40 to the nearest ten.

a



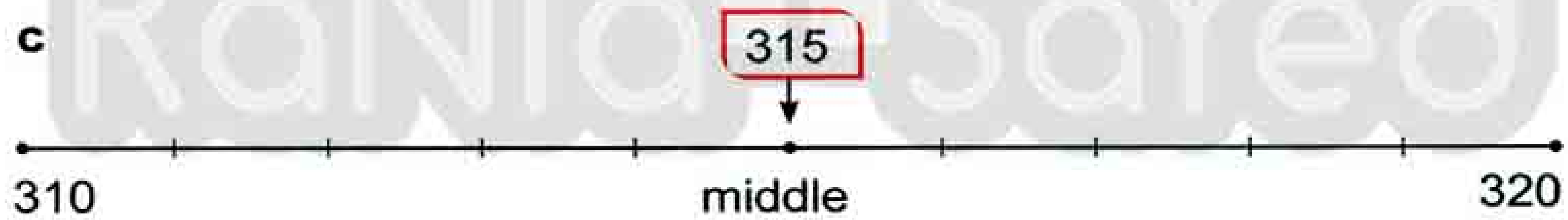
488 ≃ .... to the nearest ten.

b



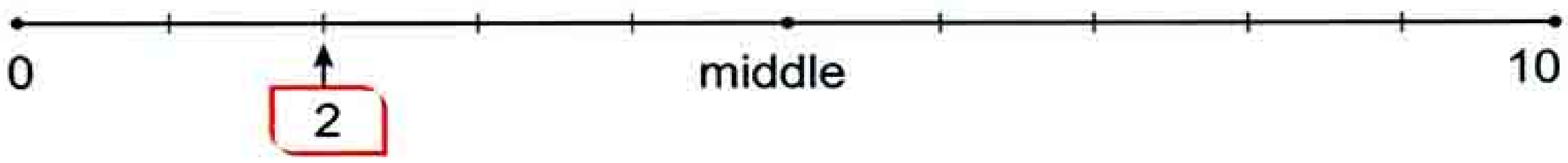
5 021 ≃ .... to the nearest ten.

c



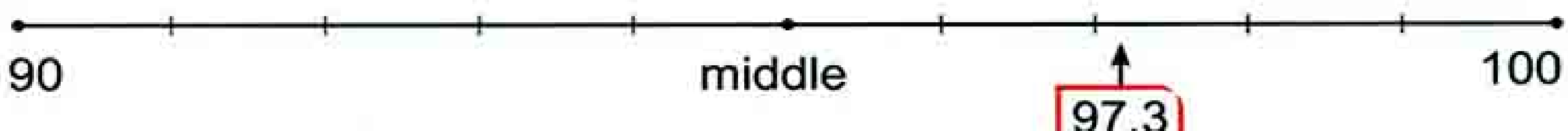
315 ≃ .... to the nearest ten.

d



2 ≃ .... to the nearest ten.

e



97.3 ≃ .... to the nearest ten.

2 **Approximate each of the following numbers to the nearest 10 as in (a) :**

a 514 ≃ 510	**b** 📖 86 029 ≃	**c** 85 ≃ ....
d 33.105 ≃	**e** 5.009 ≃	**f** 108 ≃ ....
g 17.5 ≃	**h** 218.16 ≃	**i** 2 008 ≃ ....
j 997 ≃	**k** 6.7 ≃	**l** 0.99 ≃ ....
m 📖 9 999 ≃	**n** 3 ≃	**o** 📖 9 004 ≃ ....
p 📖 21 395 ≃	**q** $543\frac{1}{4}$ ≃	**r** $\frac{19}{4}$ ≃ ....

---

3 **Find the result of each of the following operations, then approximate the result to the nearest ten as in the example :**

Example

- 13 426 + 32 623 = 46 049 ≃ 46 050
- 45 900 – 37 457 = 8 443 ≃ 8 440
- 13 465 ÷ 10 = 1 346.5 ≃ 1 350

a 32 125 + 62 342 = ... ≃ ....

b 📖 25 304 + 9 467 = ... ≃ ....

c 📖 36 523 + 36 582 = ... ≃ ....

d 43 267 ÷ 100 = ... ≃ ....

e 9 756 – 3 665 = ... ≃ ....

f 📖 46 257 – 15 391 = ... ≃ ....

g 📖 700 000 – 65 093 = ... ≃ ....

h 1 023.6 – 549.17 = ... ≃ ....

i 73 410 ÷ 1 000 = ... ≃ ....

j 24.3 + $35\frac{1}{2}$ = ... ≃ ....

k $7\frac{3}{5}$ – 3 = ... ≃ ....

Lesson 8A

4 Choose the correct answer :

a 74 approximated to the nearest 10 is .... (70 or 80 or 75)

b 619 approximated to the nearest 10 is .... (600 or 610 or 620)

c 953.4 approximated to the nearest 10 is .... (950 or 960 or 953)

d 12 578 approximated to the nearest 10 is .... (12 570 or 12 580 or 12 500)

e 6 approximated to the nearest 10 is .... (0 or 5 or 10)

f 0 approximated to the nearest 10 is .... (0 or 1 or 5)

g 999.9 approximated to the nearest 10 is .... (990 or 999 or 1 000)

h .... approximated to the nearest 10 is 200 (199.1 or 208 or 192.5 or 19.99)

5 Answer the following :

a What is the smallest whole number that if approximated to the nearest ten gives a result of 300 ? ....

b What is the greatest whole number that if approximated to the nearest ten gives a result of 12 510 ? ....

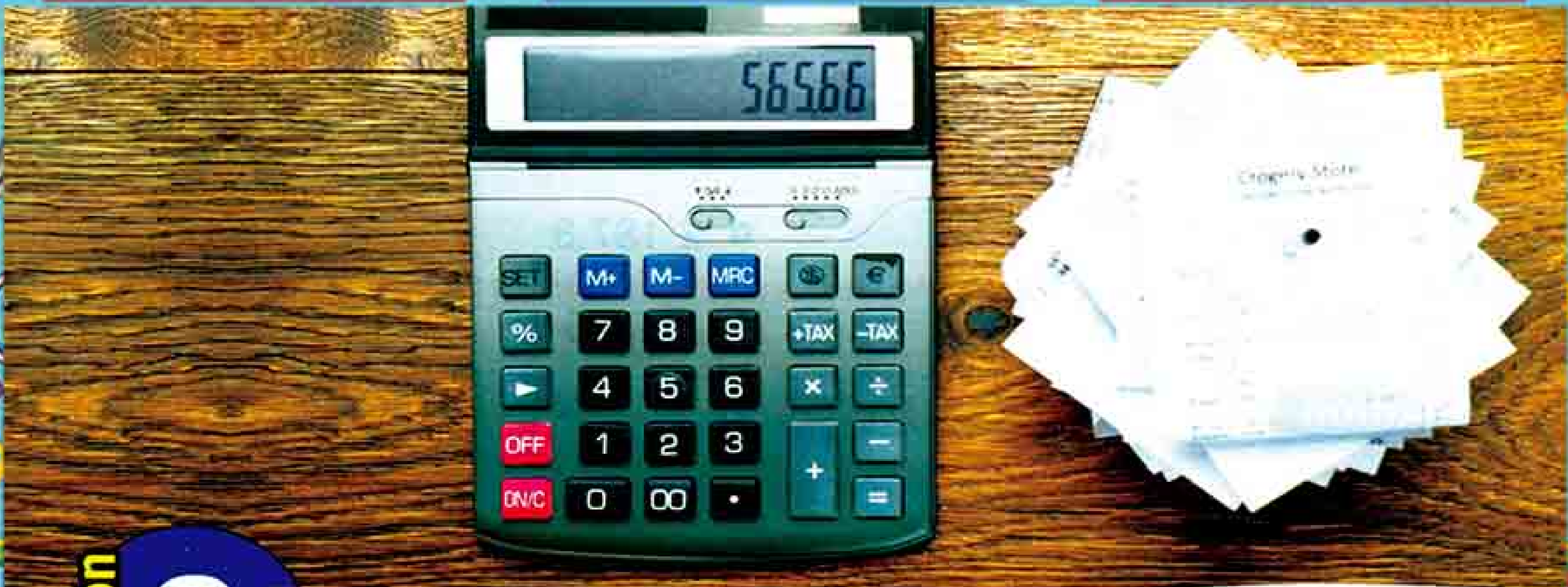
c 📖 What is the greatest whole number that if approximated to the nearest ten gives a result of 750 ?

d 📖 What is the greatest whole number that if approximated to the nearest ten gives a result of 8 000 ?

e 📖 What is the smallest whole number that if approximated to the nearest ten gives a result of 9 420 ?

6 Find a whole number , the sum of its digits is 16 and if approximated to the nearest ten gives a result of 460

7 Find the two whole numbers when we approximate each of them to the nearest ten the result is 750 and the difference between them is maximum.



Lesson **8B**

Approximating to the nearest hundred or the nearest thousand

Approximating to the nearest hundred

Rule

To approximate to the nearest hundred, do as follows :

1. If the tens digit is less than 5 (4 , 3 , 2 , 1 or 0), then replace every digit to the right of the hundreds place by zero and keep the other digits as they are.

   For example :

   • 327 ≃ 300 • 148.9 ≃ 100

2. If the tens digit is equal to 5 or more (5 , 6 , 7 , 8 or 9) , then replace every digit to the right of the hundreds place by zero , add one to the hundreds digit and also keep the other digits as they are.

   For example :

   • 5 267 ≃ 5 300 • 6 750 ≃ 6 800

Example 1

Approximate each of the following to the nearest 100 :

a 876 **b** 724

Lesson 8B

c 5 135 **d** 2 187.8

e 550 **f** 250.05

Solution

a 876 ≃ 900 **b** 724 ≃ 700

c 5 135 ≃ 5 100 **d** 2 187.8 ≃ 2 200

e 550 ≃ 600 **f** 250.05 ≃ 300

Remark

From the previous example we notice that :
When approximating to the nearest hundred , the result is perfect hundreds as : 900 , 700 , 5 100 , ...

Approximating to the nearest thousand

Rule

To approximate to the nearest thousand, do as follows :

1. If the hundreds digit is less than 5 (4 , 3 , 2 , 1 or 0), then replace every digit to the right of the thousands place by zero and keep the other digits as they are.

   For example :

   • 4 173 ≃ 4 000 • 8 359.1 ≃ 8 000

2. If the hundreds digit is equal to 5 or more (5 , 6 , 7 , 8 or 9) , then replace every digit to the right of the thousands place by zero , add one to the thousands digit and also keep the other digits as they are.

   For example :

   • 6 942 ≃ 7 000 • 170 541 ≃ 171 000

Example 2

Approximate each of the following to the nearest 1 000 :

a 3 465

b 2 950

c 501

d 2 080.25

e 12 676

f $2\ 374\frac{1}{2}$

Solution

a $3\ 465 \simeq 3\ 000$

b $2\ 950 \simeq 3\ 000$

c $501 \simeq 1\ 000$

d $2\ 080.25 \simeq 2\ 000$

e $12\ 676 \simeq 13\ 000$

f $2\ 374\frac{1}{2} = 2\ 374.5 \simeq 2\ 000$

Remark

From the previous example we notice that :

When approximating to the nearest thousand , the result is perfect thousand as : 3 000 , 1 000 , 13 000 , ...

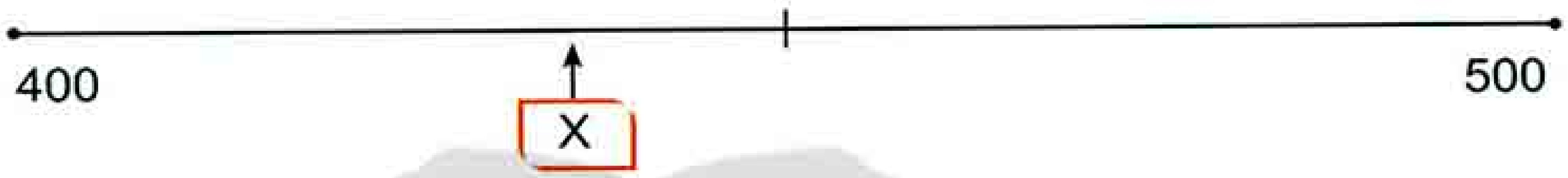
Exercise 9

Approximating to the nearest hundred or the nearest thousand

From the school book

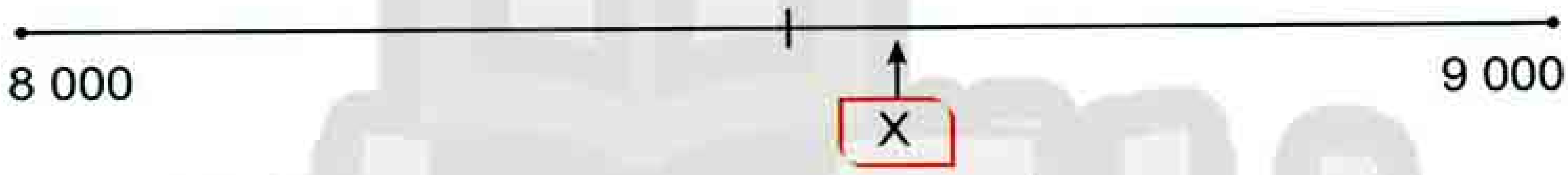
1 Observe the number X on the number line in each of the following cases and complete :

a



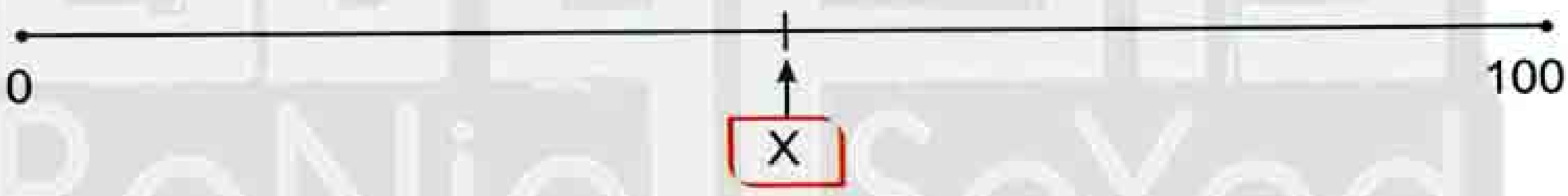
X ≃ .... to the nearest hundred.

b



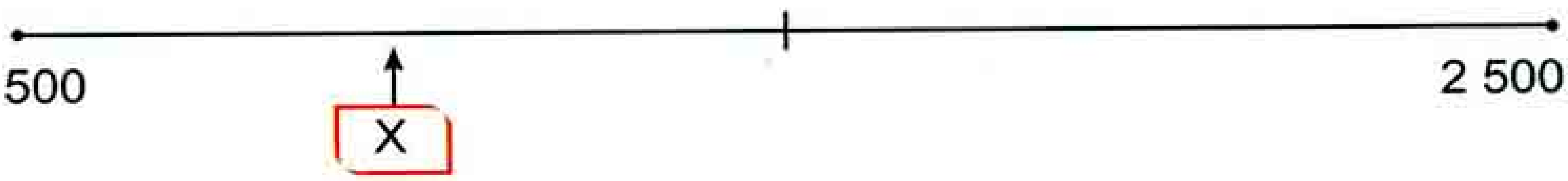
X ≃ .... to the nearest thousand.

c



X ≃ .... to the nearest hundred.

d



X ≃ .... to the nearest thousand.

2 Approximate each of the following numbers to the nearest 100 as in (a) :

a 268 ≃ 300

b 7 248 ≃ ....

c 86 ≃ ....

d 89 950 ≃ ....

e 633.15 ≃ ....

f 35.108 ≃ ....

g 999 ≃ ....

h 99 ≃ ....

i 2 009 ≃ ....

j 90.01 ≃ ....

k 9 ≃ ....

l 4.987 ≃ ....

m 372 051 ≃ ....

n 99 999 ≃ ....

o 0.98 ≃ ....

p 603 499 ≃ ....

q 973 049 ≃ ....

r 990 909 ≃ ....

3 **Approximate each of the following numbers to the nearest 1 000 as in (a) :**

a 2 514 ≃ 3 000

b 57 614 ≃ ....

c 963 014 ≃ ....

d 612.35 ≃ ....

e 498.5 ≃ ....

f 108 ≃ ....

g 506.4 ≃ ....

h 6 435.5 ≃ ....

i 9 999 ≃ ....

j 2 049 ≃ ....

k 519 900 ≃ ....

l 11.009 ≃ ....

m 75 049.9 ≃ ....

n 999 500 ≃ ....

o 99 999 ≃ ....

4 **Choose the correct answer :**

a 7 081 ≃ 7 000 to the nearest .... (10 or 100 or 1 000)

b 38 000 is the approximation of 37 865 to the nearest .... (100 or 10 or 1 000)

c 59 723 ≃ .... (to the nearest 1 000) (59 000 or 60 000 or 59 700)

d 9 748.3 ≃ 10 000 (to the nearest ....) (10 or 100 or 1 000)

Lesson 8B

e 9 705.26 ≃ 9 700 (to the nearest ....) (100 or 10 or 1 000)

f 610.9 ≃ .... (to the nearest 100) (610 or 700 or 600)

g 3 000 is the approximation of the number .... to the nearest thousand. (2 498 or 2 625 or 3 512)

---

5 **Find the result of each of the following operations, then approximate the result in each of the following cases :**

a 483 + 96 = ... ≃ .... to the nearest 100

b 1 325 + 7 406 = ... ≃ .... to the nearest 1 000

c 30 406 – 17 918 = ... ≃ .... to the nearest 1 000

d 📖 93 608.2 + 18 905 = ... ≃ .... to the nearest 100

e 📖 893.44 + 987.56 = ... ≃ .... to the nearest 100

f 📖 60 000 – 48.6 = ... ≃ .... to the nearest 100

g 15 726 ÷ 100 = ... ≃ .... to the nearest 100

h 999 ÷ 100 = ... ≃ .... to the nearest 100

---

6 **Complete the following table with suitable numbers :**

	Number	Approximated to the nearest 10	Approximated to the nearest 100	Approximated to the nearest 1 000
a	6 927	....	....	....
b	517 109	....	....	....
c	4 381.5	....	....	....
d	649.75	....	....	....
e	38	....	....	....
f	6 543 217	....	....	....
g	3	....	....	....

7 **Answer the following :**

a What is the smallest whole number that if approximated to the nearest hundred gives a result of 700 ? ....

b What is the greatest whole number that if approximated to the nearest thousand gives a result of 10 000 ? ....

c What is the greatest whole number that if approximated to the nearest hundred gives a result of 9 900 ? ....

d What is the smallest whole number that if approximated to the nearest thousand gives a result of 30 000 ? ....

8 **Complete using suitable digits :**

a ☐ 261 ≃ 5 000 to the nearest 1 000

b ☐ 47 ≃ 800 to the nearest 100

c ☐ 9 ≃ 0 to the nearest 100

d 6 ☐ 74 ≃ ☐ 300 to the nearest 100

Real Life Problems

Example

Five trucks were loaded with cement packets.
If each truck had a load of 475 packets ,
Find the number of packets approximating the result to the nearest hundred.

The number of packets = 5 × 475 = 2 375 ≃ 2 400 packets.

Lesson 8B

a A primary school has 15 classes.
Each class has 31 pupils.
Calculate the total number of pupils approximating the result to the nearest hundred.

....

....

b Sally bought a blouse for L.E. 25.3 ,
a bag for L.E. 35.7 and a pair of shoes for L.E. 85
How much money did she pay approximated to the nearest ten ?

....

....

c The human heart , during the sport exercises , pumps 7 litres of blood in one minute. How many litres of blood does the heart pump in 30 minutes, approximating to the nearest hundred ?

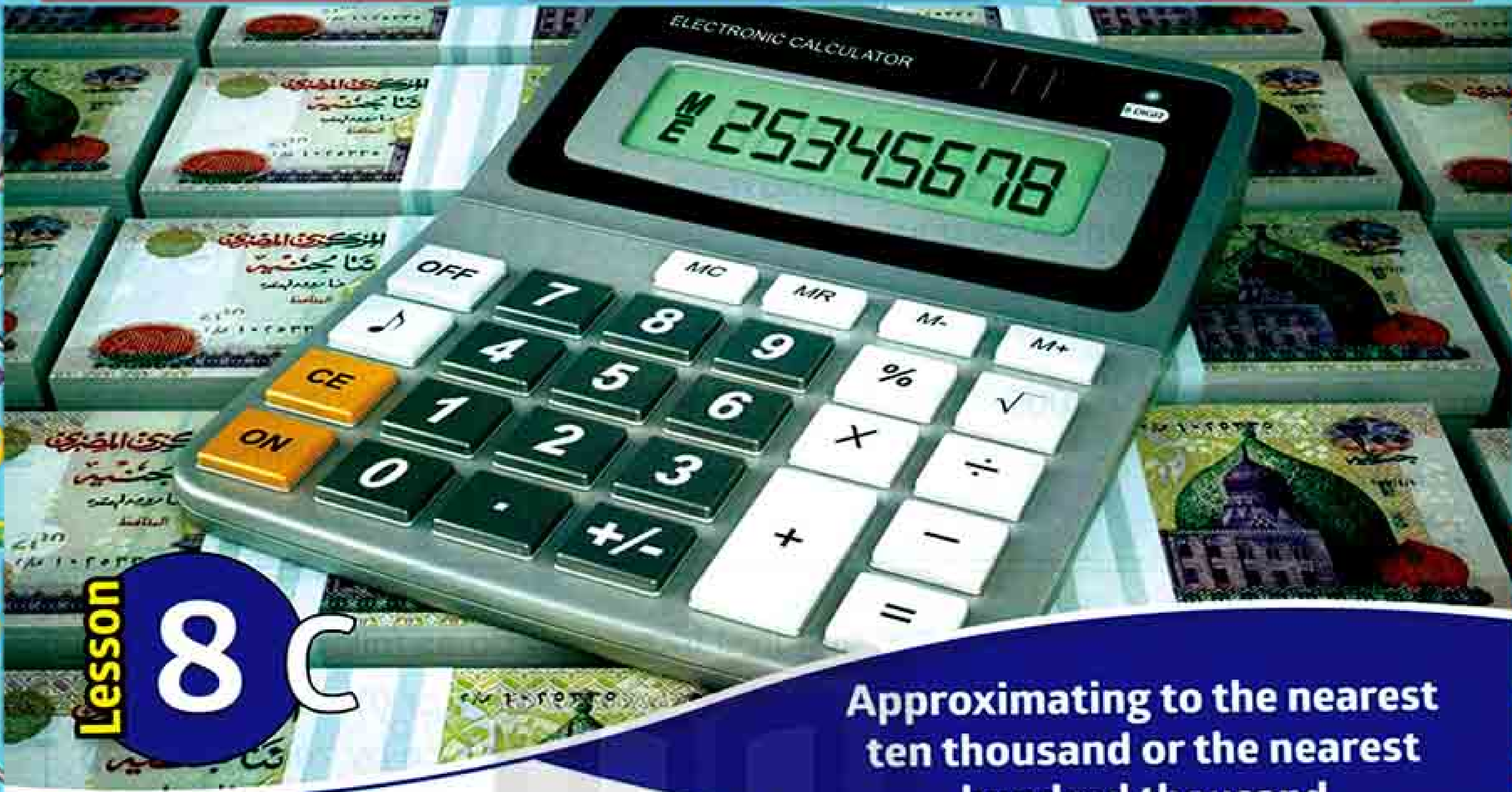
....

....

d A box contains 36 pieces of soap.
Find the number of pieces ina 15 boxes approximating the result to the nearest hundred.

....

....



Lesson 8C Approximating to the nearest ten thousand or the nearest hundred thousand

Rule

To approximate to the nearest ten thousand, do as follows :

1. If the thousands digit is less than 5 (4 , 3 , 2 , 1 or 0), then replace every digit to the right of the ten thousands place by zero and keep the other digits as they are.

   For example :

   - 23 452 ≃ 20 000
   - 921 602.6 ≃ 920 000

2. If the thousands digit is equal to 5 or more (5 , 6 , 7 , 8 or 9) , then replace every digit to the right of the ten thousands place by zero , add one to the ten thousands digit and also keep the other digits as they are.

   For example :

   - 27 501 ≃ 30 000
   - 565 372.4 ≃ 570 000

Example 1

Approximate each of the following to the nearest ten thousand :

a 307 345 **b** 10 300

c 74 432.1 **d** 528 157

e 3 999 **f** 995 999.4

Lesson 8 C

Solution

a 307 345 ≃ 310 000

b 10 300 ≃ 10 000

c 74 432.1 ≃ 70 000

d 528 157 ≃ 530 000

e 3 999 ≃ 0

f 995 999.4 ≃ 1 000 000

Rule

To approximate to the nearest hundred thousand, do as follows :

1. If the ten thousands digit is less than 5 (4 , 3 , 2 , 1 or 0), then replace every digit to the right of the hundred thousands place by zero and keep the other digits as they are.

   For example :

   • 235 746 ≃ 200 000 • 9 740 111.6 ≃ 9 700 000

2. If the ten thousands digit is equal to 5 or more (5 , 6 , 7 , 8 or 9) , then replace every digit to the right of the hundred thousands place by zero , add one to the hundred thousands digit and also keep the other digits as they are.

   For example :

   • 552 891 ≃ 600 000 • 7 682 003.8 ≃ 7 700 000

Example 2

Approximate each of the following to the nearest hundred thousand :

a 17 052 827

b 51 960 000

c 2 343 578.9

d 21 999

Solution

a 17 052 827 ≃ 17 100 000

b 51 960 000 ≃ 52 000 000

c 2 343 578.9 ≃ 2 300 000

d 21 999 ≃ 0

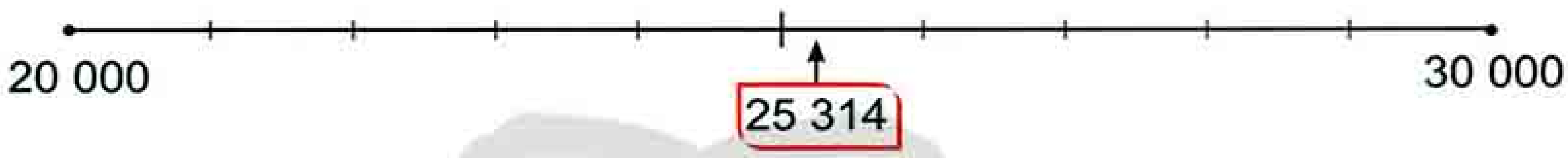
Exercise 10

Approximating to the nearest ten thousand or the nearest hundred thousand

From the school book

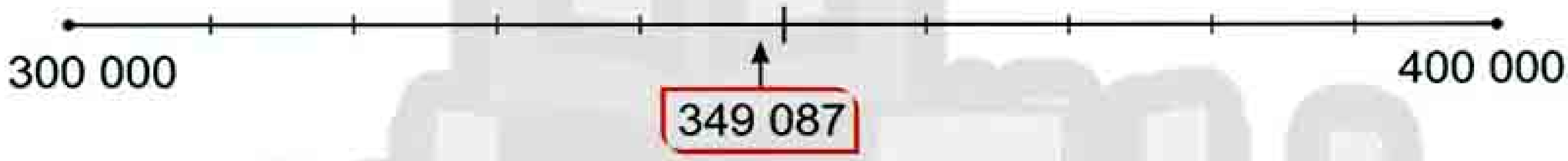
1 Notice the position of each of the following numbers on the number line , then complete :

a



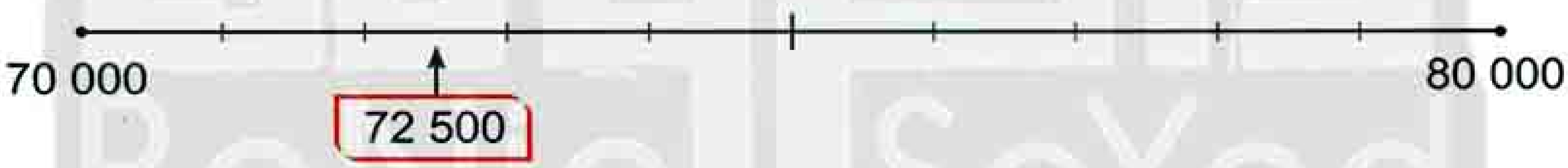
25 314 ≃ ·········· to the nearest ten thousand.

b



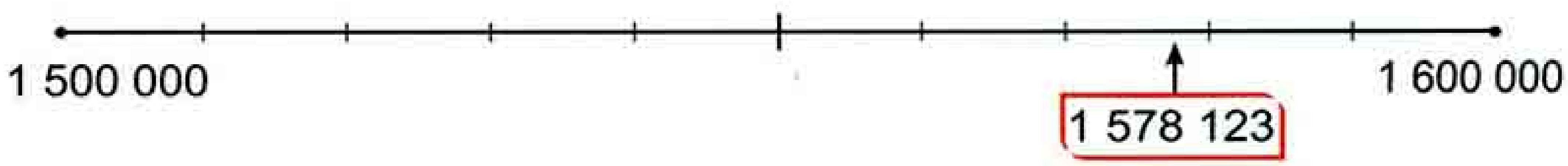
349 087 ≃ ·········· to the nearest hundred thousand.

c



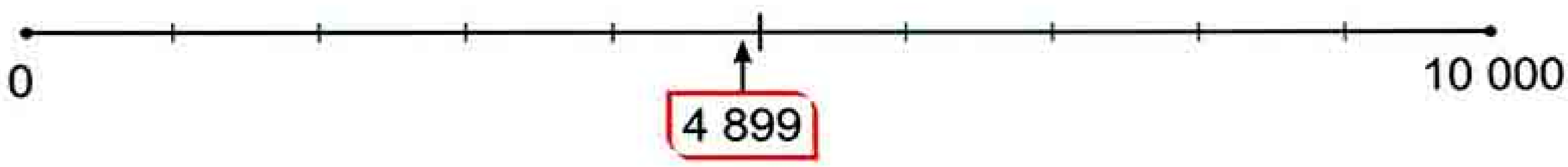
72 500 ≃ ·········· to the nearest ten thousand.

d



1 578 123 ≃ ·········· to the nearest hundred thousand.

e



4 899 ≃ ·········· to the nearest ten thousand.

Lesson 8C

2 Approximate each of the following numbers to the nearest 10 000 :

a 153 876 ≃ ....
b 547 218 ≃ ....
c 9 256 ≃ ....
d 42 633.15 ≃ ....
e 5 000 ≃ ....
f 65 432.1 ≃ ....
g 10 500 ≃ ....
h 999 ≃ ....
i 2 050 ≃ ....
j 54 399 $\frac{1}{4}$ ≃ ....
k 8 943.52 ≃ ....
l 236 849.99 ≃ ....
m 5.962 ≃ ....
n 991 234 ≃ ....

3 Approximate each of the following numbers to the nearest 100 000 :

a 872 514 ≃ ....
b 507 614 ≃ ....
c 650 049.76 ≃ ....
d 1 234 578.9 ≃ ....
e 99 897.5 ≃ ....
f 92 752.64 ≃ ....
g 4 995 007 ≃ ....
h 19 980 ≃ ....
i 7 358 ≃ ....
j 61 950 000 ≃ ....
k 87 654 321 ≃ ....
l 50.009 ≃ ....
m 999 999 ≃ ....
n 261 542 $\frac{1}{4}$ ≃ ....

4 Choose the correct answer :

a 15 674 ≃ .... (to the nearest 10 000)

(20 000 or 15 000 or 16 000)

b 249 108 ≃ .... (to the nearest 100 000)

(100 000 or 200 000 or 24 000)

c 768 154 ≃ 770 000 approximated to the nearest ....

(1 000 or 10 000 or 100 000)

d 8 321 ≃ 10 000 approximated to the nearest ....

(1 000 or 10 000 or 100 000)

e 1 217 ≃ .... (to the nearest 10 000) (1 000 or 0 or 1 200)

5 **Find the result of each of the following operations , then approximate the result in each of the following case :**

a 7 842 + 12 715 = ... ≃ .... to the nearest ten thousand.

b 87 540 – 5 999 = ... ≃ .... to the nearest ten thousand.

c 18 395 + 970 406 = ... ≃ .... to the nearest hundred thousand.

d 122 406.7 – 49 618.13 = ... ≃ .... to the nearest hundred thousand.

e 57 482.53 + 6 680.364 = ... ≃ .... to the nearest hundred thousand.

f 37 805.8 – 21 947.004 = ... ≃ .... to the nearest ten thousand.

6 **Answer the following :**

a What is the smallest whole number that if approximated to the nearest ten thousand gives a result of 40 000 ? ....

b 📖 What is the greatest whole number that if approximated to the nearest ten thousand gives a result of 20 000 ? ....

c What is the smallest whole number that if approximated to the nearest ten thousand gives a result of 10 000 ? ....

d 📖 What is the greatest different digits whole number that if approximated to the nearest hundred thousand gives a result of 98 500 000 ? ....

e 📖 What is the smallest different digits whole number that if approximated to the nearest ten thousand gives a result of 21 060 000 ? ....

Lesson 8D
Approximating to the nearest unit

Rule

To approximate to the nearest unit , do as follows :

1. If the tenths digit is less than 5 , then cancel the decimal part and keep the whole number as it is.

   For example :

   • 12.41 ≃ 12   • 125.067 ≃ 125

2. If the tenths digit is equal to 5 or more , then cancel the decimal part and add 1 to the units digit and keep the other digits as they are.

   For example :

   • 428.6 ≃ 429   • 10.5 ≃ 11

Notice that :

Sometimes we say approximating to the nearest whole number instead of approximating to the nearest unit.

Example 1

Approximate each of the following numbers to the nearest unit (whole number) :

a 28.12   b 52.5   c 402.601

d 257.09   e 0.7   f 0.215

Solution

a 28.12 ≃ 28

b 52.5 ≃ 53

c 402.601 ≃ 403

d 257.09 ≃ 257

e 0.7 ≃ 1

f 0.215 ≃ 0

Remember that :

1 km. = 1 000 m.
1 kg. = 1 000 gm.
1 month = 30 days.
1 week = 7 days.

1 m. = 10 dm.
L.E. 1 = P.T. 100
1 day = 24 hours.

1 dm. = 10 cm.
1 year = 12 months.
1 hour = 60 minutes.

Example 2

Approximate each of the following :

a 3.82 m. (to the nearest metre)

b 4 924 cm. (to the nearest metre)

c 9 746 gm. (to the nearest kg.)

d P.T. 3 645 (to the nearest L.E.)

Solution

a 3.82 m. ≃ 4 m.

b 4 924 cm. = 49.24 m. ≃ 49 m.

c 9 746 gm. = 9.746 kg. ≃ 10 kg.

d P.T. 3 645 = L.E. 36.45 ≃ L.E. 36

Rule

To approximate any fraction to the nearest unit , do as follows :

Multiply the numerator by 2 , then you have two cases :

1. If the product is less than the denominator , then cancel the fraction and keep the whole number as it is.

   For example : $10\frac{1}{4}$ since $1 \times 2 = 2 < 4$, then $10\frac{1}{4} \simeq 10$

2. If the product is greater than or equal to the denominator , then cancel the fraction and add 1 to the units digit.

   For example : $24\frac{4}{5}$ since $4 \times 2 = 8 > 5$, then $24\frac{4}{5} \simeq 25$

Lesson 8D

Example 3

Approximate each of the following to the nearest unit :

a $6\frac{1}{2}$ **b** $3\frac{1}{4}$

c $\frac{1}{8}$ **d** $19\frac{3}{4}$

Solution

a $6\frac{1}{2} \simeq 7$ because $(1 \times 2) = 2$

b $3\frac{1}{4} \simeq 3$ because $(1 \times 2) < 4$

c $\frac{1}{8} \simeq 0$ because $(1 \times 2) < 8$

d $19\frac{3}{4} \simeq 20$ because $(3 \times 2) > 4$

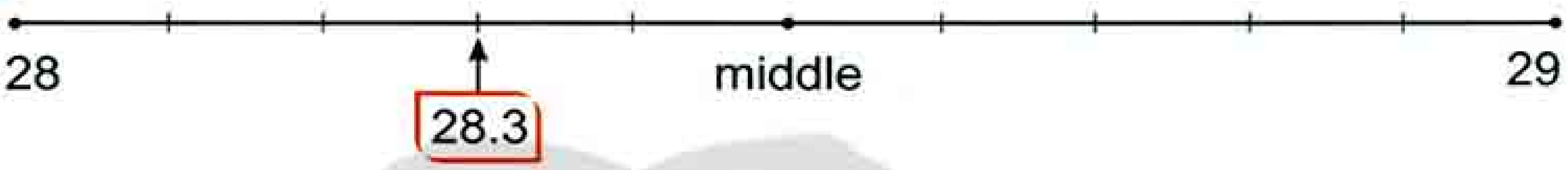
Exercise 11

Approximating to the nearest unit

📖 From the school book

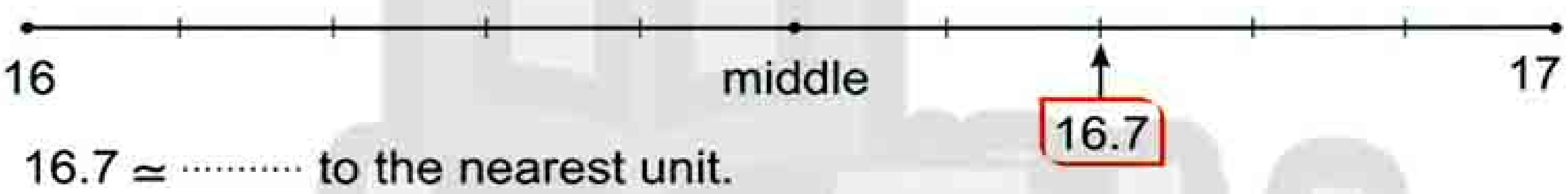
1 Notice the position of each of the following numbers on the number line , then complete :

a 📖



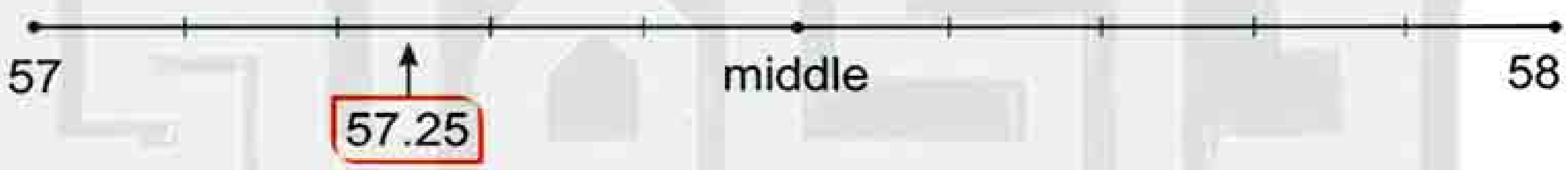
28.3 ≃ .... to the nearest unit.

b



16.7 ≃ .... to the nearest unit.

c

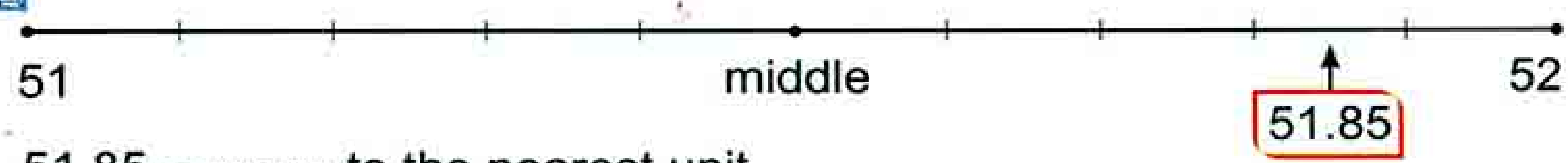


57.25 ≃ .... to the nearest unit.

d 📖

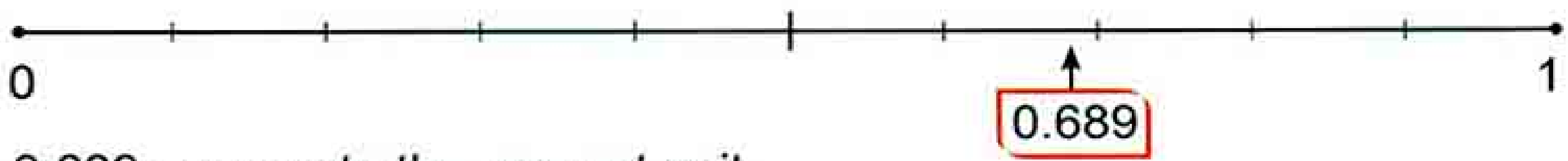
140.5 ≃ .... to the nearest unit.

e 📖



51.85 ≃ .... to the nearest unit.

f



0.689 ≃ .... to the nearest unit.

Lesson 8D

2 **Approximate each of the following numbers to the nearest unit :**

a $2.7 \simeq$ ....
b $3.1 \simeq$ ....
c 📖 $53.5 \simeq$ ....
d $7\,105.09 \simeq$ ....
e $28\,147.801 \simeq$ ....
f $0.215 \simeq$ ....
g $0.512 \simeq$ ....
h $9.9 \simeq$ ....
i 📖 $10.1 \simeq$ ....
j 📖 $624.09 \simeq$ ....
k 📖 $600.601 \simeq$ ....
l 📖 $\frac{7}{10} \simeq$ ....
m 📖 $\frac{3}{5} \simeq$ ....
n $0.009 \simeq$ ....
o 📖 $967\frac{3}{4} \simeq$ ....
p $0.999 \simeq$ ....
q $5\frac{2}{9} \simeq$ ....
r $3\frac{5}{8} \simeq$ ....
s $7\frac{1}{3} \simeq$ ....
t $2\frac{73}{100} \simeq$ ....
u $\frac{7}{9} \simeq$ ....

3 **Choose the correct answer :**

a $14.6 \simeq$ .... (to the nearest unit) (14 or 15 or 14.5)

b $158.3 \simeq$ .... (to the nearest ten) (158 or 150 or 160)

c $25.49 \simeq$ .... (to the nearest unit) (26 or 25 or 25.5)

d $0.947 \simeq$ .... (to the nearest unit) (1 or 0 or 10)

e $999.9 \simeq$ .... (to the nearest unit) (990 or 999 or 1 000)

f The number 254 is the approximation of .... (to the nearest unit) (254.6 or 253.1 or 253.9)

g $\frac{20}{3} \simeq$ .... (to the nearest unit) (6.6 or 6 or 7)

h 652 to the nearest thousand .... 989.88 to the nearest unit. (< or = or >)

i 97.75 m. $\simeq$ .... (to the nearest metre) (100 or 97 or 98)

j 3 187 cm. $\simeq$ .... (to the nearest metre) (32 or 31 or 3)

k 39 days $\simeq$ .... weeks. (to the nearest week) (5 or 6 or 7)

l 140 minutes $\simeq$ .... hours. (1 or 2 or 3)

m 90 hours $\simeq$ .... days. (to the nearest day) (4 or 3 or 5)

n P.T. 7 085 ≃ L.E. .... (71 or 70 or 708)

o 39 months ≃ .... years. (2 or 3 or 4)

p If the distance between two cities is 4 800 m.
this approximately equals .... km. (5 000 or 5 or 4)

4 **Find the result of each of the following operations, then approximate the result to the nearest whole number :**

a 3.7 + 2.4 = ... ≃ ....

b 25.2 – 16.3 = ... ≃ ....

c 158.24 – 62.76 = ... ≃ ....

d 75 + 64.3 = ... ≃ ....

e 53.64 + 8.601 = ... ≃ ....

f 104.9 – 23.58 = ... ≃ ....

g 345 ÷ 100 = ... ≃ ....

h 9 681 ÷ 1 000 = ... ≃ ....

i $3.5 - 1\frac{3}{4}$ = ... ≃ ....

j (5 242 ÷ 100) + (3 426 ÷ 1 000) = ... ≃ ....

5 **Approximate to the nearest km. :**

a 532.41 km. ≃ .... km.

b 63 622 m. ≃ .... km.

c 2 764 815 dm. ≃ .... km.

d 9 745 312 cm. ≃ .... km.

e 73 489 m. ≃ .... km.

f 4 518 253 dm. ≃ .... km.

6 **Approximate to the nearest L.E. :**

a L.E. 57.3 ≃ L.E. ....

b P.T. 305 ≃ L.E. ....

Lesson 8D

c L.E. 759 $\frac{3}{5}$ ≃ L.E. ....

d P.T. 25 615 ≃ L.E. ....

e L.E. 537.6 ≃ L.E. ....

f P.T. 569 425 ≃ L.E. ....

7 **Approximate to the nearest hour :**

a 5 hr. and 15 min. ≃ .... hr.

b 2 hr. and 35 min. ≃ .... hr.

c 7 hr. and 30 min. ≃ .... hr.

Real Life Problems

a The monthly salary of an employee is L.E. 700.35, if he spends L.E. 425 of it.
How much money does he save every month approximating to then earest L.E. ?

....

b Waleed bought a pair of trousers for L.E. 89.6 and a shirt for L.E. 30.75, if he gave L.E. 200 to the shopkeeper.
How much change remained with Waleed approximating the result to the nearest pound ?

....

....

c Calculate the perimeter of a triangle , given that its sides are of lengths 67.8 cm. , 15.9 cm. and 73.2 cm. approximating the result to the nearest metre.

....

Lesson 8E

Approximating to the nearest tenth

Rule

To approximate to the nearest tenth $\left(0.1 \text{ or } \frac{1}{10}\right)$, do as follows :

1. If the hundredths digit is less than 5, then cancel all the digits to the right of the tenth place and keep the other digits as they are.

   For example :

   - 6.42 ≃ 6.4
   - 17.345 ≃ 17.3

2. If the hundredths digit is equal to 5 or more, then cancel all the digits to the right of the tenth place, add 1 to the tenth digit and also keep the other digits as they are.

   For example :

   - 123.75 ≃ 123.8
   - 327.082 ≃ 327.1

Notice that :

Sometimes we say approximating to the nearest 1 decimal place (0.1) instead of approximating to the nearest tenth $\left(\frac{1}{10}\right)$

Lesson 8E

Example

Approximate each of the following to one decimal place :

a 6.247

b 56.256

c 17.97

d $81\frac{3}{4}$

e 47.051

f $\frac{57}{1\,000}$

Solution

a $6.247 \simeq 6.2$

b $56.256 \simeq 56.3$

c $17.97 \simeq 18.0 = 18$

d $81\frac{3}{4} = 81.75 \simeq 81.8$

e $47.051 \simeq 47.1$

f $\frac{57}{1\,000} = 0.057 \simeq 0.1$

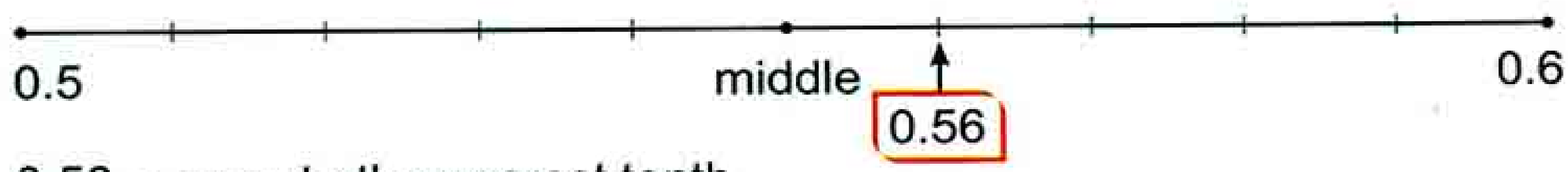
Exercise 12

Approximating to the nearest tenth

📖 From the school book

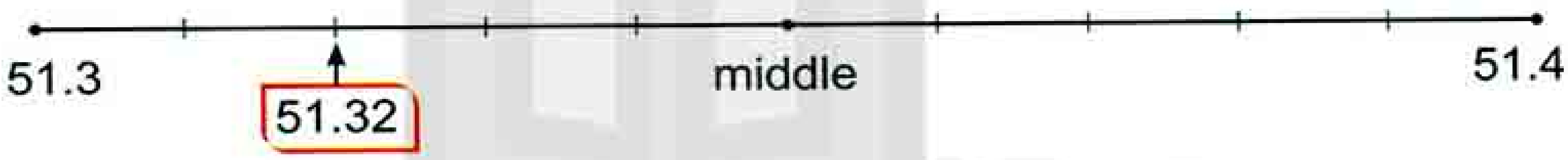
1 **Notice the position of each of the following numbers on the number line, then complete :**

a



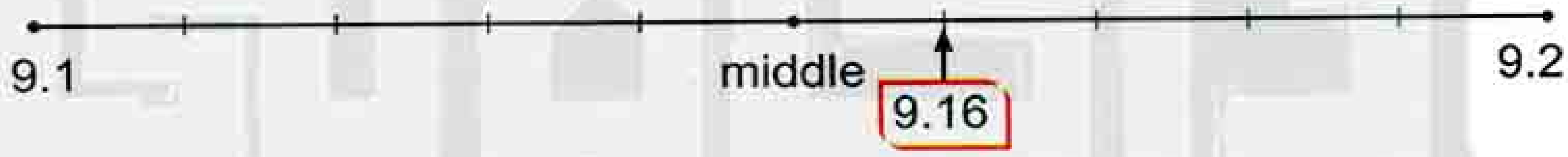
0.56 ≃ .... to the nearest tenth.

b



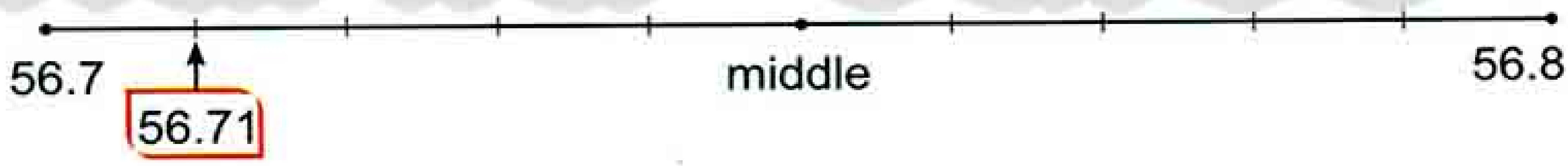
51.32 ≃ .... to the nearest tenth.

c



9.16 ≃ .... to the nearest 1 decimal place.

d



56.71 ≃ .... to the nearest tenth.

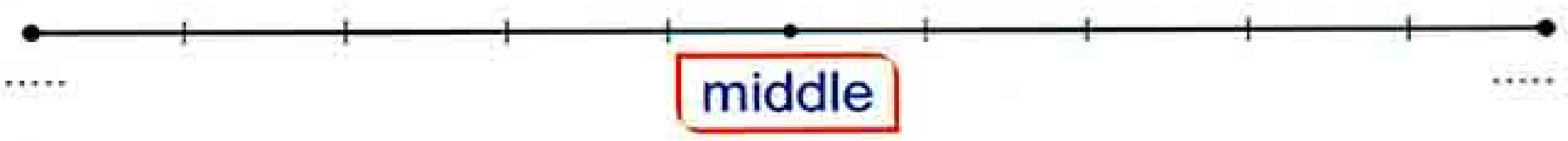
2 📖 **Determine the position of each of the following numbers on the number line, then complete :**

a 134.29

134.29 ≃ .... to the nearest tenth.

Lesson 8E

b 70.07



70.07 ≃ .... to the nearest 1 decimal place.

---

3 Approximate each of the following numbers to the nearest 1 decimal place :

a 7.34 ≃ ....

b 📖 13.75 ≃ ....

c 📖 296.04 ≃ ....

d 📖 83.914 ≃ ....

e 📖 90.092 ≃ ....

f 0.208 ≃ ....

g 📖 170.597 ≃ ....

h 3.92 ≃ ....

i 📖 43.95 ≃ ....

j 38 000.75 ≃ ....

k 121.005 ≃ ....

l 257.06 ≃ ....

m $\frac{1}{8}$ ≃ ....

n 0.07 ≃ ....

o 0.994 ≃ ....

p 📖 $502\frac{37}{100}$ ≃ ....

q 📖 $449\frac{3}{4}$ ≃ ....

r 📖 $6\,399\frac{7}{50}$ ≃ ....

---

4 Choose the correct answer :

a 65.35 ≃ .... (to the nearest tenth) (65 or 65.4 or 65.3)

b 53.825 ≃ .... (to the nearest $\frac{1}{10}$) (54 or 53.9 or 53.8)

c 17.947 ≃ .... (to the nearest 1 decimal point) (17.95 or 17.9 or 18)

d 348.6 ≃ .... (to the nearest unit) (348 or 340 or 349)

e 371.456 ≃ .... (to the nearest 100) (300 or 400 or 371.46)

f 9 317 ≃ 9 000 to the nearest .... (10 or 100 or 1 000)

g $14\frac{3}{7} \simeq 10$ to the nearest .... (unit or 10 or tenth)

h $39.953 \simeq$ .... (to the nearest tenth) (39.9 or 40 or 39.1)

5 **Find the result of each of the following operations, then approximate the result to the required approximation :**

a 14.201 + 9.315 = ... ≃ .... to the nearest tenth.

b 0.816 – 0.207 = ... ≃ .... to the nearest tenth.

c 158.24 + 62.76 = ... ≃ .... to the nearest ten.

d 25.6 + 63.7 = ... ≃ .... to the nearest unit.

e 864.3 + 75.2 = ... ≃ .... to the nearest ten.

f 453.64 – 72.317 = ... ≃ .... to the nearest 1 decimal.

g 353.607 – 214.98 = ... ≃ .... to the nearest unit.

h 6.47 + 24.7 + 1.562 = ... ≃ .... to the nearest $\frac{1}{10}$

i $251.76 - 38\frac{1}{4}$ = ... ≃ .... to the nearest tenth.

6 **Complete with suitable numbers :**

	Number	The number approximated to the nearest					
		10 000	1 000	100	10	unit	tenth
a	124 547.259	....	....	....	....	....	....
b	205 138.613	....	....	....	....	....	....
c	78 314.501	....	....	....	....	....	....
d	7 007.499	....	....	....	....	....	....
e	320.549	....	....	....	....	....	....
f	288 003.507	....	....	....	....	....	....
g	3.172	....	....	....	....	....	....
h	0.008	....	....	....	....	....	....

Lesson 8E

7 Write each of the required numbers using all the digits 2, 3, 5, 8 and a decimal point to satisfy the following equalities :

Example

82.35 ≃ 82 to the nearest whole number.

a ………… ≃ 20 to the nearest ten.

b ………… ≃ 83.3 to the nearest tenth.

c ………… ≃ 8 000 to the nearest thousand.

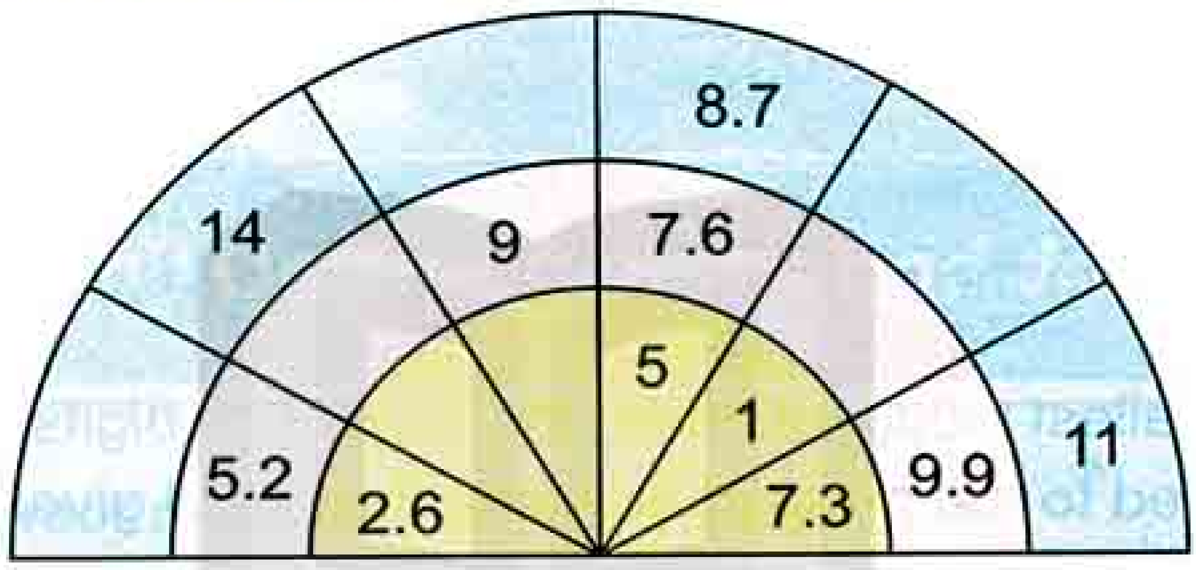
d ………… ≃ 9 000 to the nearest thousand.

e ………… ≃ 28.4 to the nearest tenth.

Activities from the school book

Activity 1

Discover the rule and complete with suitable numbers :



Activity 2

a Find two numbers, each of them is formed from 4 digits and a decimal point, where their sum is 100 and the difference between them is 11.5

b How many numbers each of them is formed from 3 digits and a decimal point, lie between 1 and 1.5 ?

c Find two numbers such that their sum is 8.2 and their product is 16

d Find a number which lies between 50 and 100 and is formed from 4 digits and a decimal point, such that it satisfies all the following conditions :

1. Its tens digit is double its hundredths digit.
2. Its units digit is three times its hundredths digit.
3. Its tenths digit is one third its tens digit.

Activity 3

Put the decimal points in their suitable places in each of the following to make the statement true :

a 9 347 + 6 529 = 99 999

b 483 + 725 = 5 555

c 95 087 – 1 731 = 77 777

d 456 – 34 489 = 11 111

Activities

Activity 4

The greatest and the smallest number :

a Find the greatest whole number that if approximated to the nearest thousand gives a result 6 000

b Find the smallest whole number that if approximated to the nearest hundred gives a result 400

c Find the greatest whole number, the sum of its digits is 21 and if approximated to the nearest hundred gives a result 3 700

d Find the smallest whole number, the sum of its digits is 36 and if approximated to the nearest hundred thousand gives a result of 2 900 000

Activity 5

The same resulted approximation :

a Find two numbers such that the difference between them is 900 and have the same result if approximated to the nearest 1 000

b Find two numbers such that the difference between them is 9 900 and have the same result if approximated to the nearest 10 000

c Find the greatest possible difference between two whole numbers such that they have the same result if approximated to the nearest : ten, hundred, thousand, ten thousand or hundred thousand.

Activity 6

Complete with suitable digits :

a 2 ☐ 43 ☐ + 40 ☐ 58 ≃ ☐ 3 000 to the nearest thousand.

b 1 ☐ 20 ☐ + 293 ☐ 4 ≃ ☐ 6 600 to the nearest hundred.

c 7 ☐ 0.6 ☐ + 26 ☐ . ☐ ☐ ≃ ☐ ☐ 44.8 to the nearest tenth.

d 40 ☐ 6.5 + ☐ 360. ☐ ≃ 6 400 to the nearest ten.

GENERAL EXERCISE

From the school book

Unit One "Fractions and decimal numbers"

1 Choose the correct answer from those given :

1. 1 548 ÷ 100 = ...
   a. 154.8   b. 15.48   c. 154   d. 0.48

2. 251 056 ≃ 251 100 to the nearest ....
   a. 10 000   b. 1 000   c. 100   d. 10

3. 6 thousandth added to 4 hundredth equals ....
   a. 0.46   b. 0.046   c. 0.64   d. 0.0064

4. The value of the digit 3 in the number 2.35 = ...
   a. 0.3   b. 3   c. 0.03   d. 0.003

5. The number which is next to the number 314.99 is ....
   a. 314.00   b. 315   c. 314.100

6. 7 + 0.4 + 0.03 + 0.009 = ...
   a. 7.349   b. 7.937   c. 7.439

7. The value of the digit (6) in the number 18.36 is ....
   a. 6   b. 60   c. 0.06   d. 600

8. $9\frac{7}{100}$ = ...
   a. 9.07   b. 9.7   c. 9.007   d. 7.09

General Exercise

9 $\frac{3}{4}$ = ...

a. 0.75 b. 0.8 c. 0.0755 d. 0.25

10 657 $\frac{4}{5}$ = ... to the nearest whole number.

a. 657 b. 658 c. 655 d. 659

11 The number $\frac{17}{5}$ = ...

a. 2 $\frac{3}{5}$ b. 5 $\frac{2}{3}$ c. 5 $\frac{3}{5}$ d. 3 $\frac{2}{5}$

12 The value of the digit (4) in the number 0.241 is ....

a. 0.04 b. 0.4 c. 4 d. 40

13 7 $\frac{3}{5}$ = ...

a. 7.6 b. 6.7 c. 7.5

14 78 ÷ 10 = ...

a. 8.7 b. 780 c. 7.8

15 494 ÷ 100 = ...

a. 5.95 b. 4.94 c. 49.4

16 4 $\frac{1}{5}$ 4.2

a. > b. < c. = d. otherwise

17 35.26 ≃ 35.3 to the nearest ....

a. 0.1 b. 0.01 c. 0.001 d. 10

18 The decimal which is included between (0.6 , 0.7) is ....

a. 0.71 b. 0.67 c. 0.59 d. 0.76

19 7 $\frac{3}{5}$ = ...

a. $\frac{15}{5}$ b. $\frac{26}{5}$ c. $\frac{38}{5}$ d. $\frac{10}{5}$

20 The value of the digit (3) in the number 4.238 is ....

a. 0.3 b. 0.03 c. 3 d. 0.003

21 $\frac{9}{4}$ = ...

a. 2.5 b. 2.25 c. 2.75 d. 2.1

22 25 $\frac{1}{3}$ kg. = ... (to the nearest kg.)

a. 26 b. 24 c. 25 d. $\frac{76}{3}$

23 3 750 cm. = ... metre

a. 3.75 b. 373 c. 375 000 d. 37.5

24 96.58 ≃ .... (to the nearest unit)

a. 96 b. 97 c. 96.5 d. 96.6

25 The decimal whose value is included between 0.3 and 0.4 is ....

a. 0.41 b. 0.31 c. 0.13 d. 0.4

26 Fifty six thousandth is written as ....

a. 0.56 b. 0.65 c. 0.065 d. 0.056

---

2 Complete each of the following :

1. 159.5 + 375.3 ≃ .... (to the nearest hundred)
2. 86.7 – 17.45 ≃ .... (to the nearest one decimal)
3. 73 641 ÷ 1 000 ≃ .... (to the nearest 10)
4. 9.467 = 9 + ... + 0.06 + ...
5. 8 – 3 $\frac{4}{5}$ ≃ .... (to the nearest unit)
6. 7 units and 5 thousandth = ...
7. 4 $\frac{3}{100}$ kg. = ... (a decimal number)
8. 32 749 – 9 378 = ... (to the nearest thousnad)
9. The decimal 0.19 is included between .... and ....

General Exercise

10 $86.9 \simeq 90$ to the nearest ....

11 $0.1 + ... = 1$

12 32 days $\simeq$ .... (to the nearest week)

13 The number $5.7 = 5 +$ ....

14 $6\,198 \simeq$ .... (to the nearest ten)

15 Sixty five and eight tenths is written as ....

16 $412 \div 1\,000 =$ ....

17 $\frac{3}{4} = \frac{..........}{8} = \frac{9}{..........}$

18 $0.37 + 0.43 + ... = 1$

19 $2\frac{5}{7} = \frac{..........}{..........}$

20 $\frac{9}{5} = \frac{9 \times ....}{5 \times ....} = 1.8$

21 $42.85 \div 10 = ... \simeq ....$ (to the nearest one decimal)

22 $1 - \frac{1}{9} \simeq$ .... (to the nearest unit)

23 $\frac{77}{7} = \frac{..........}{..........} =$ ....

24 $0.6 - 0.275 =$ ....

25 $9.8 - 4.3 =$ ....

26 $58 \div 10 =$ ....

27 $\frac{3}{4} = \frac{..........}{8}$

28 The value of the digit 7 in the number 123.579 = ...

29 $1 = 0.4 +$ ....

30 $93.82 \simeq$ .... (to the nearest one decimal)

31 Sixty five and eight hundredth is written as ....

32 3.2 , 3.4 , 3.6 , ...

3 **Put the suitable relation (< , > or =) :**

1 7 850 ÷ 100 ☐ 78.5

2 The value of the digit (4) in the number 0.941 ☐ the value the digit (2) in the number 0.21

3 28.4 ☐ 2.84

4 5.7 + 1.4 ☐ 12.78 – 3.5

5 1.75 ☐ $1\frac{3}{4}$

6 35 × 10 ☐ 3 × 100

7 7.9 + 2.3 ☐ 11.7 – 1.3

8 800 ÷ 100 ☐ 785 ÷ 10

---

4 **Put (✓) for the correct statement and (✗) for the incorrect one :**

1 0.49 < 0.5 ( )

2 1 = 0.25 ( )

3 4 units and 8 tenths = 8.4 ( )

4 The number 8 500 is the approximation of the numebr 8 532 to the nearest 1 000 ( )

5 The fractional form of the number $5\frac{1}{4}$ is $\frac{10}{4}$ ( )

6 Twenty nine thousandth is written as 0.029 ( )

7 0.37 = 0.7 + 0.30 ( )

8 Seven and fifty three hundredth = 53.7 ( )

9 4.9 < 9 + 0.4 ( )

10 6 hundredths + 16 tenths = 6.22 ( )

11 The value of the digit (3) in the number 72.435 = 0.30 ( )

General Exercise

5 **Arrange ascendingly :**

1 $6\frac{1}{4}$, 6.63 , $6\frac{1}{2}$, 6.11

2 33.12 , 33.02 , 30.8 , 30.196

6 **Find the result of the following :**

1 $12.7 + 10.007 \simeq$ ………… (to the nearest $\frac{1}{10}$)

2 $52.46 - 2.731 \simeq$ ………… (to the nearest unit)

3 $23\,456 \div 100 \simeq$ ………… (to the nearest 10)

4 $\frac{3}{4}$ + ………… = 1

5 $96.8 - 62.31 \simeq$ ………… (to the nearest $\frac{1}{10}$)

6 $42\,819 \div 1\,000 \simeq$ ………… (to the nearest unit)

7 **Answer the following :**

1 If Hosam has 425 pounds , and his sister Hoda has 98.75 pounds.
Find the difference between them.
The difference between what they have = ………… – …………
= ………… pounds.

2 A road is of length 55 km. , 25.78 km. of it are paved.
How long is the remained part without paving ?
……………………………………………………………………………………

Test on the second part of unit one

(from lesson 7 to lesson 8E)

1 Choose the correct answer from the given ones :

1. $42.81 \simeq$ .... (to the nearest unit) (42.8 or 43 or 42 or 44)
2. $63.45 + 21.88 =$ .... (85.23 or 84.33 or 85.33 or 85.34)
3. $100 - 37.28 =$ .... (62.72 or 62.62 or 72.62 or 62.73)
4. $5\,766 \div 1\,000 =$ .... (57.66 or 5.766 or 576.6 or 0.5 766)
5. $\frac{1}{8} + 0.13 =$ .... (0.138 or 0.265 or 0.255 or 0.25)
6. $9\,085 \simeq 9\,000$ (to the nearest ....)
   (10 or 100 or 1 000 or 10 000)
7. $6.5 + 2.5$ ☐ $12.8 - 3.8$ ($>$ or $=$ or $<$)
8. $12.5 \div$ .... $= 0.125$ (10 or 100 or 1 000 or 10 000)
9. $160.754 \simeq$ .... (to the nearest tenth)
   (160.8 or 160.7 or 200 or 161)
10. $75 \div 10$ ☐ 0.75 ($>$ or $=$ or $<$)

2 Complete each of the following :

11. $876\,522 \simeq$ .... (to the nearest 100 000)
12. $96.8 - 62.3 =$ .... $\simeq$ .... (to the nearest ten)
13. $7\frac{4}{5} \simeq$ .... (to the nearest whole number)
14. $57.8 + 29.37 =$ ....
15. $72.46 - 55.71 =$ .... $\simeq$ .... (to the nearest $\frac{1}{10}$)
16. 3.2 , 3.4 , 3.6 , ... , ... (in the same pattern)

TEST ?

3 Answer the following :

17 Mina has 32.85 pounds and his sister Remonda has 20.10 pounds. Find the difference between what they have.
The difference = ... = ... pounds.

18 Use the numbers : 5.3 , 8.3 , 10.3 , 5.13 and 5.31 to complete :

a. The smallest number is ....

b. The greatest number is ....

c. Their sum = ... = ...

d. The difference between them = ... = ...

19 Complete : 37 months ≃ .... years. (to the nearest year)

20 Sameh bought 10 lamps for 125 pounds. Find the price of each lamp.
The price of each lamp = ... = ... pounds.

UNIT 2 Geometry

Lessons of the unit :

1. Congruency.
2. Symmetrical figures and lines of symmetry.
3. Visual patterns.

- Activities.
- General exercise.

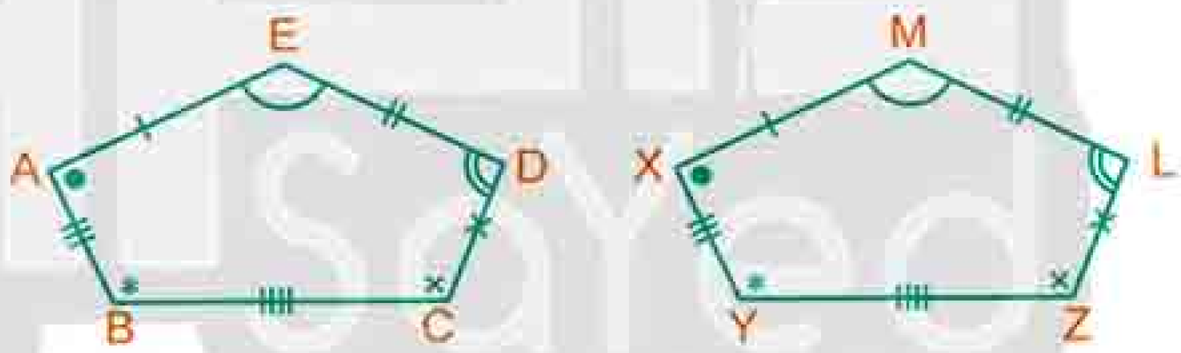
Lesson 1

Congruency

Two polygons are congruent if :

1. Their corresponding sides are equal in length.
2. Their corresponding angles are equal in measure.

For example :



- In the two opposite polygons, if :

1. AB = XY , BC = YZ , CD = ZL , DE = LM and EA = MX
2. m (∠ A) = m (∠ X) , m (∠ B) = m (∠ Y) , m (∠ C) = m (∠ Z) , m (∠ D) = m (∠ L) and m (∠ E) = m (∠ M)

then, the polygon ABCDE **is congruent to** the polygon XYZLM

and we write the polygon ABCDE ≡ the polygon XYZLM

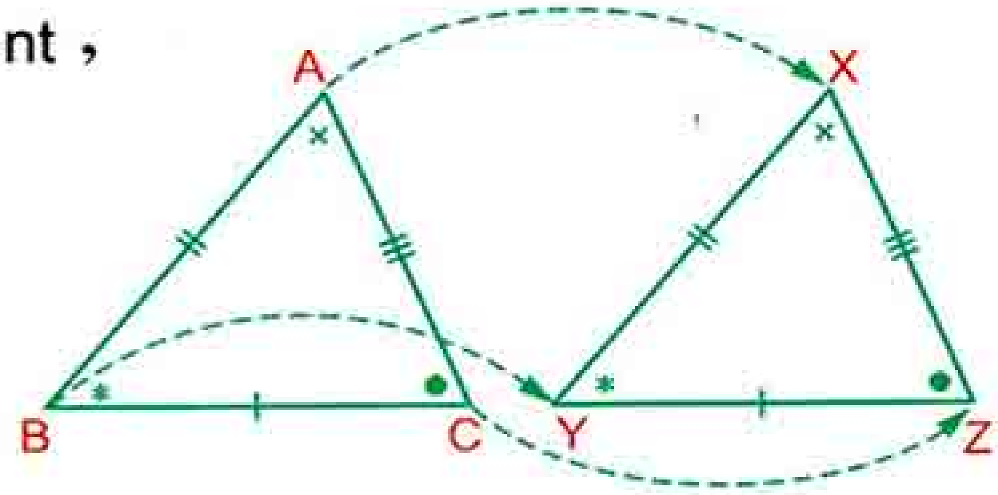
Remark 1

The two congruent polygons should be written in the same order of their corresponding vertices.

For example :

If the two opposite triangles are congruent , then we write :

△ A B C ≡ △ X Y Z
coresponds to



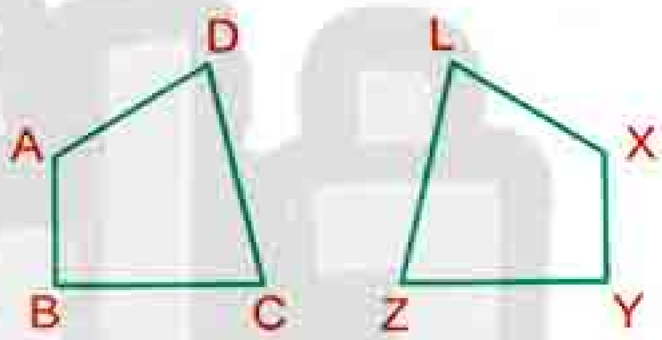
Remark 2

If the two polygons are congruent, then each side and each angle in one of them is congruent to its corresponding element in the other polygon.

For example :

If the polygon ABCD ≡ the polygon XYZL , then :

1. AB = XY , BC = YZ , CD = ZL and DA = LX
2. m (∠ A) = m (∠ X) , m (∠ B) = m (∠ Y) , m (∠ C) = m (∠ Z) and m (∠ D) = m (∠ L)



Remark 3

Equality of the corresponding sides of two polygons is not enough to get congruent polygons, but equality of the corresponding angles is needed as well.

Special cases

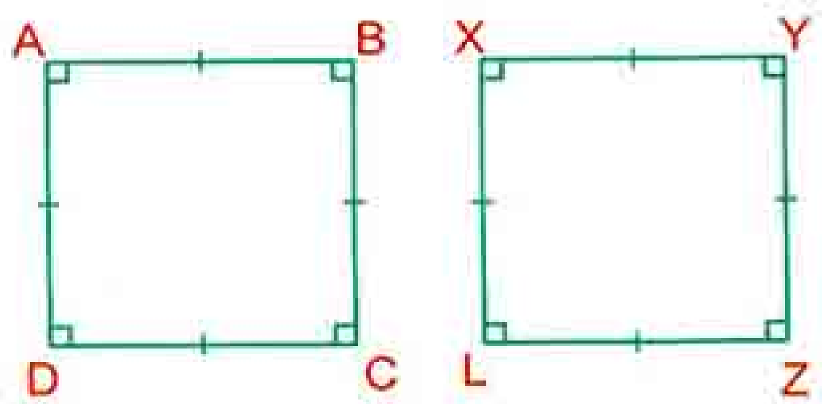
1 Two squares are congruent if the side length of one of them equals the side length of the other.

For example :

We say that :

The square ABCD ≡ the square XYZL

if AB = XY



Lesson 1

2 Two rectangles are congruent if the length of one of them equals the length of the other and the width of one of them equals the other.

In other words :

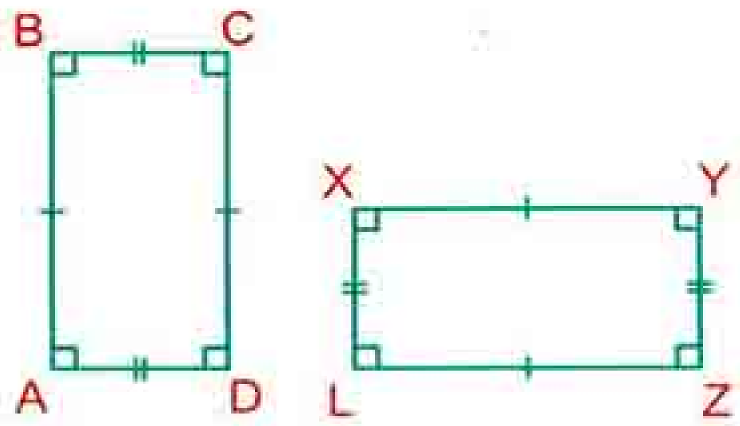
Two rectangles are congruent if the two dimensions of one of them equal the two dimensions of the other.

For example :

We say that :

The rectangle ABCD ≡ the rectangle XYZL

if AB = XY and BC = YZ



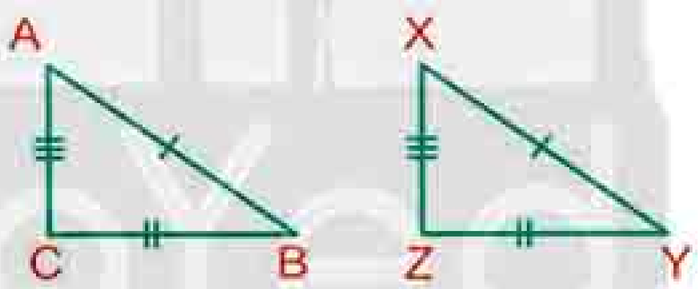
3 Equality of corresponding sides of two triangles, is enough to be congruent triangles. This is because the equality of the corresponding sides of two triangles leads to equality of their corresponding angles.

For example :

We say that :

Δ ABC ≡ Δ XYZ

because : AB = XY , BC = YZ and CA = ZX

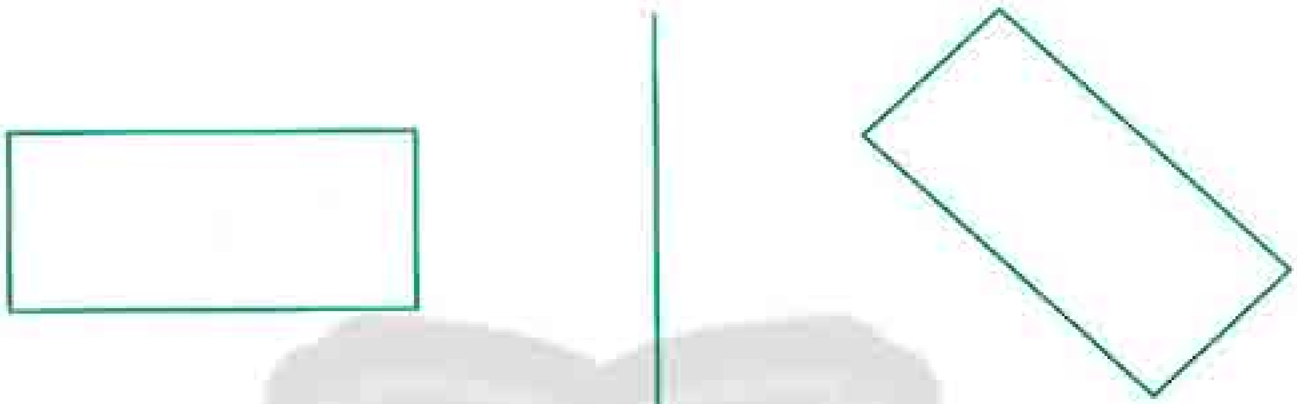


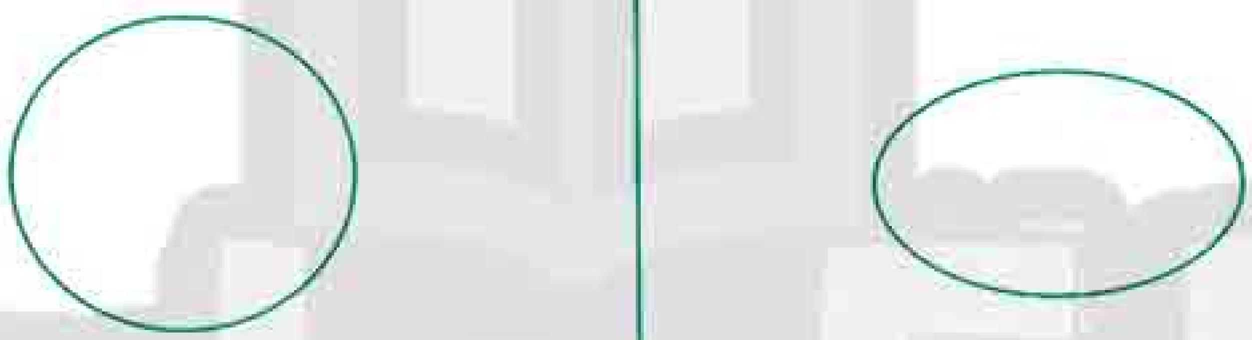
Exercise 13

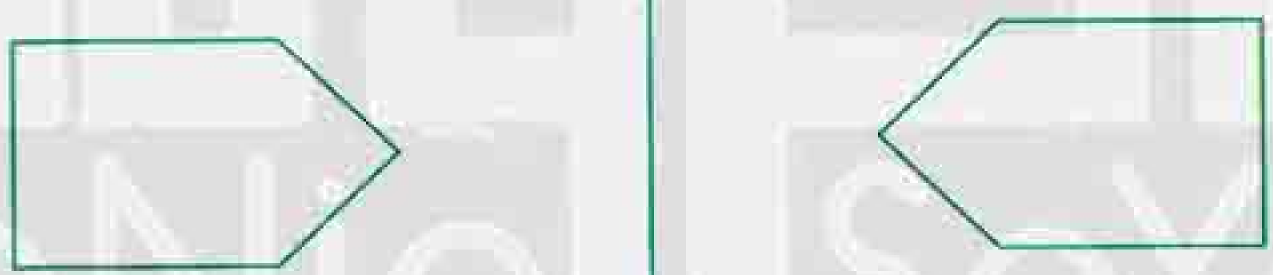
Congruency

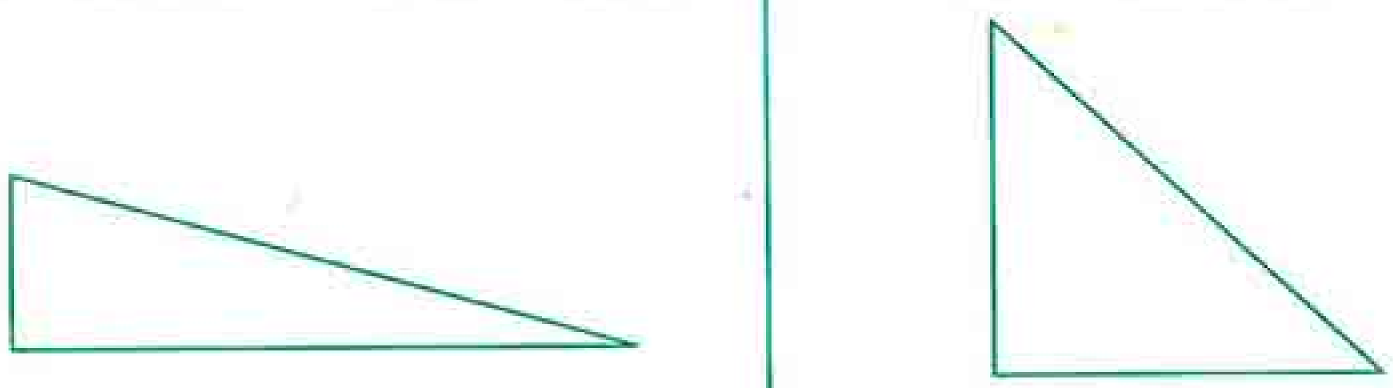
From the school book

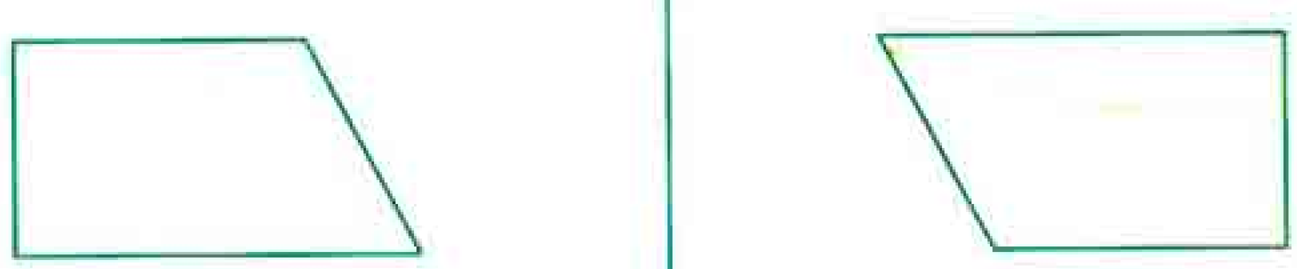
1 Are the figures congruent ? Write Yes or No as in (a) :

a

Yes

b

....

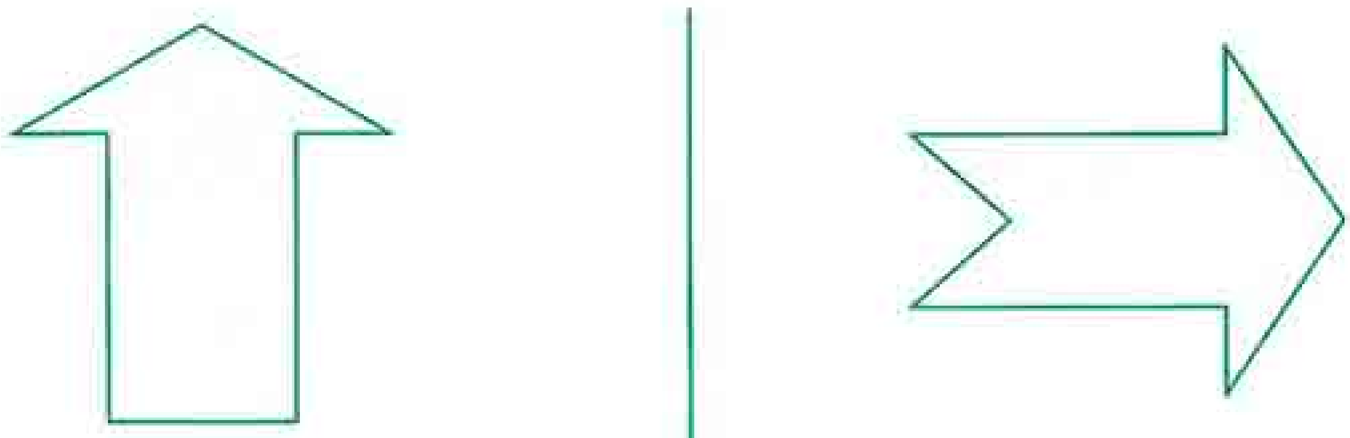
c

....

d

....

e

....

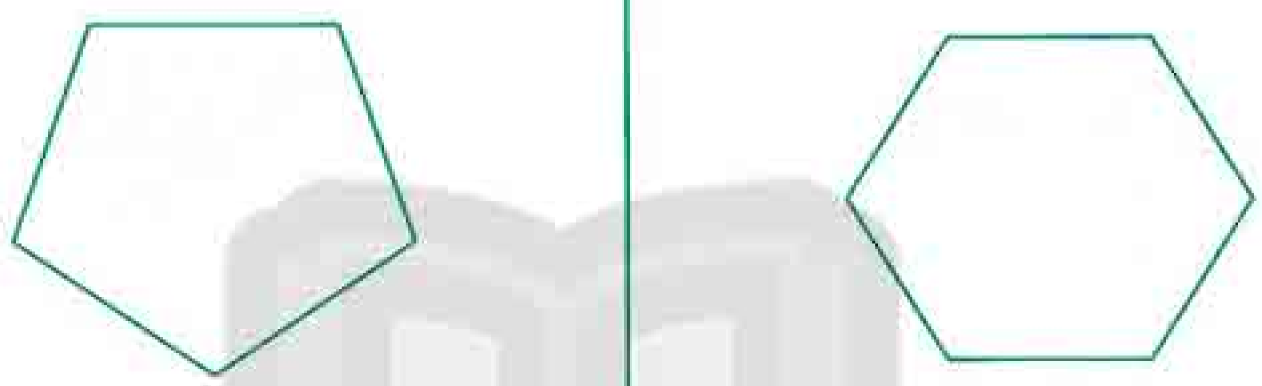
Lesson 1

f



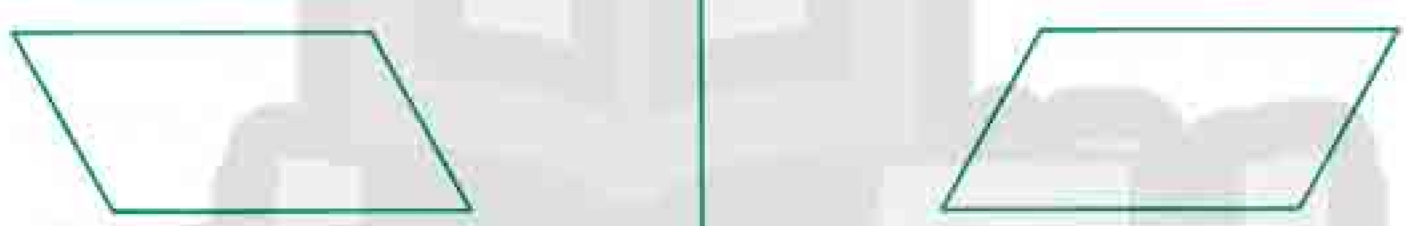
....

g



....

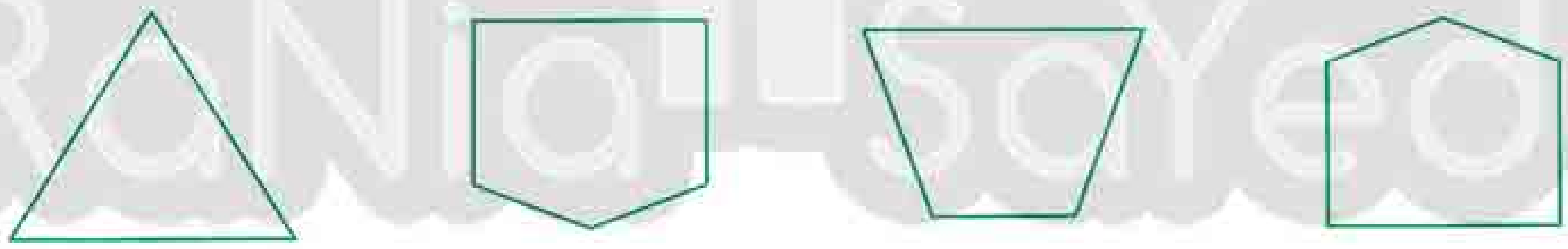
h



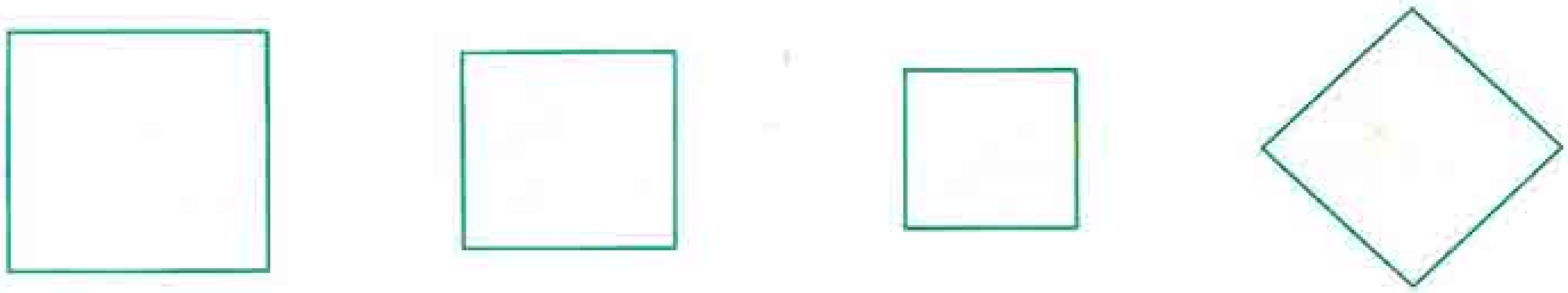
....

2 Circle the two congruent shapes in each of the following cases. Use your geometric instruments to review your answer :

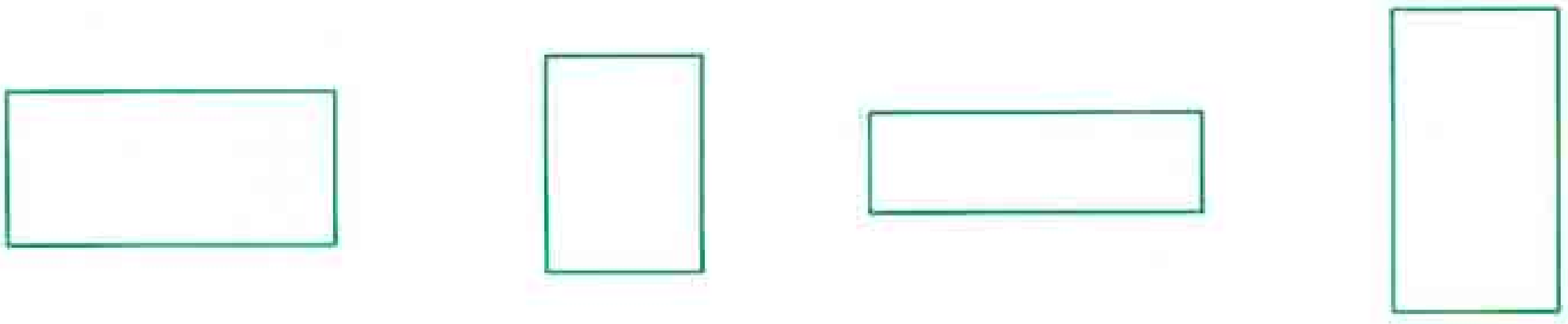
a



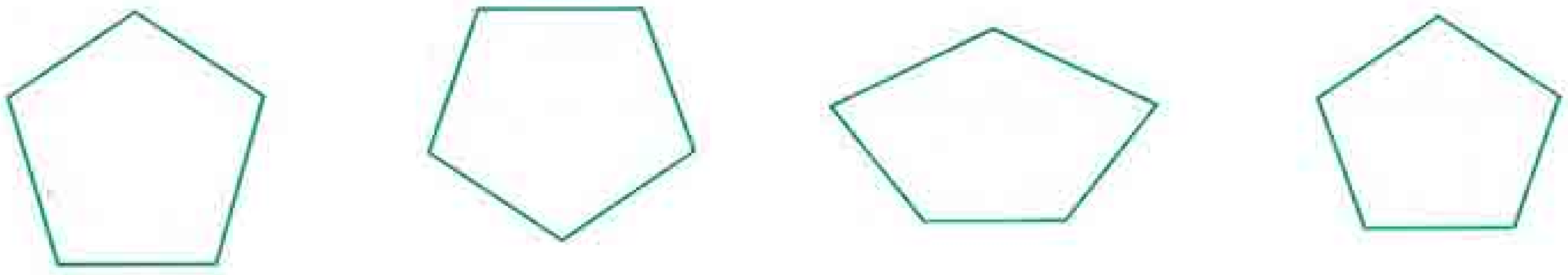
b



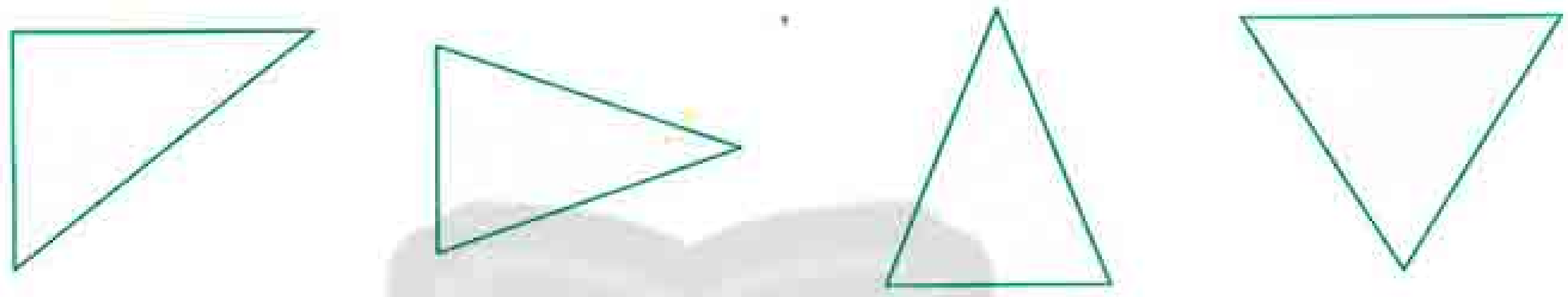
c



d



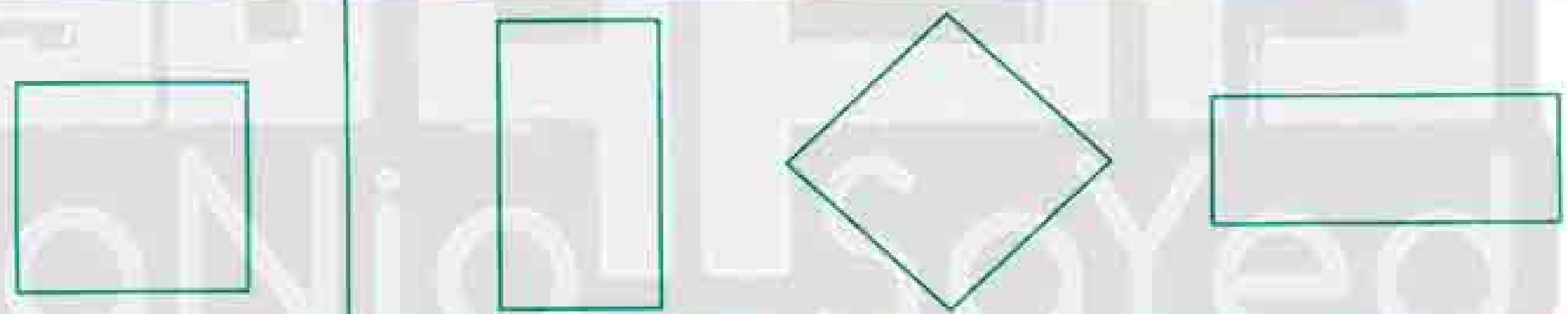
e



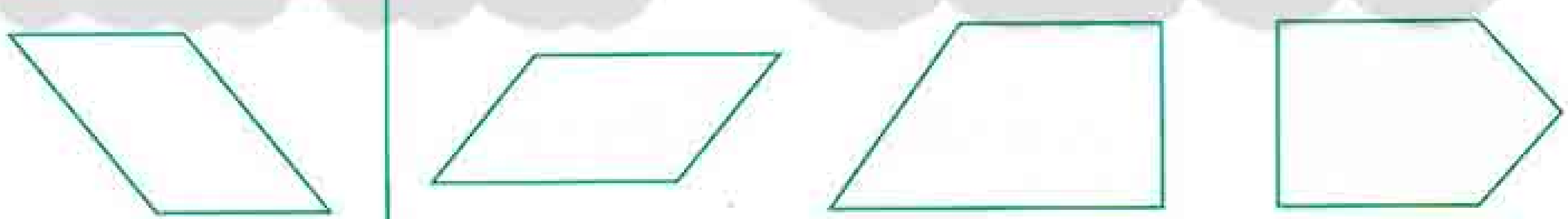
3 Ring the figure which is congruent to the first one :

a

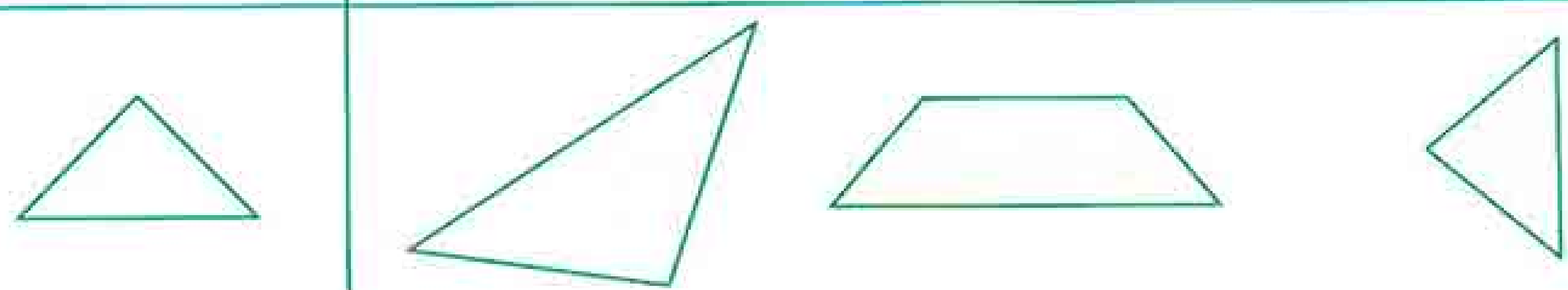
b



c

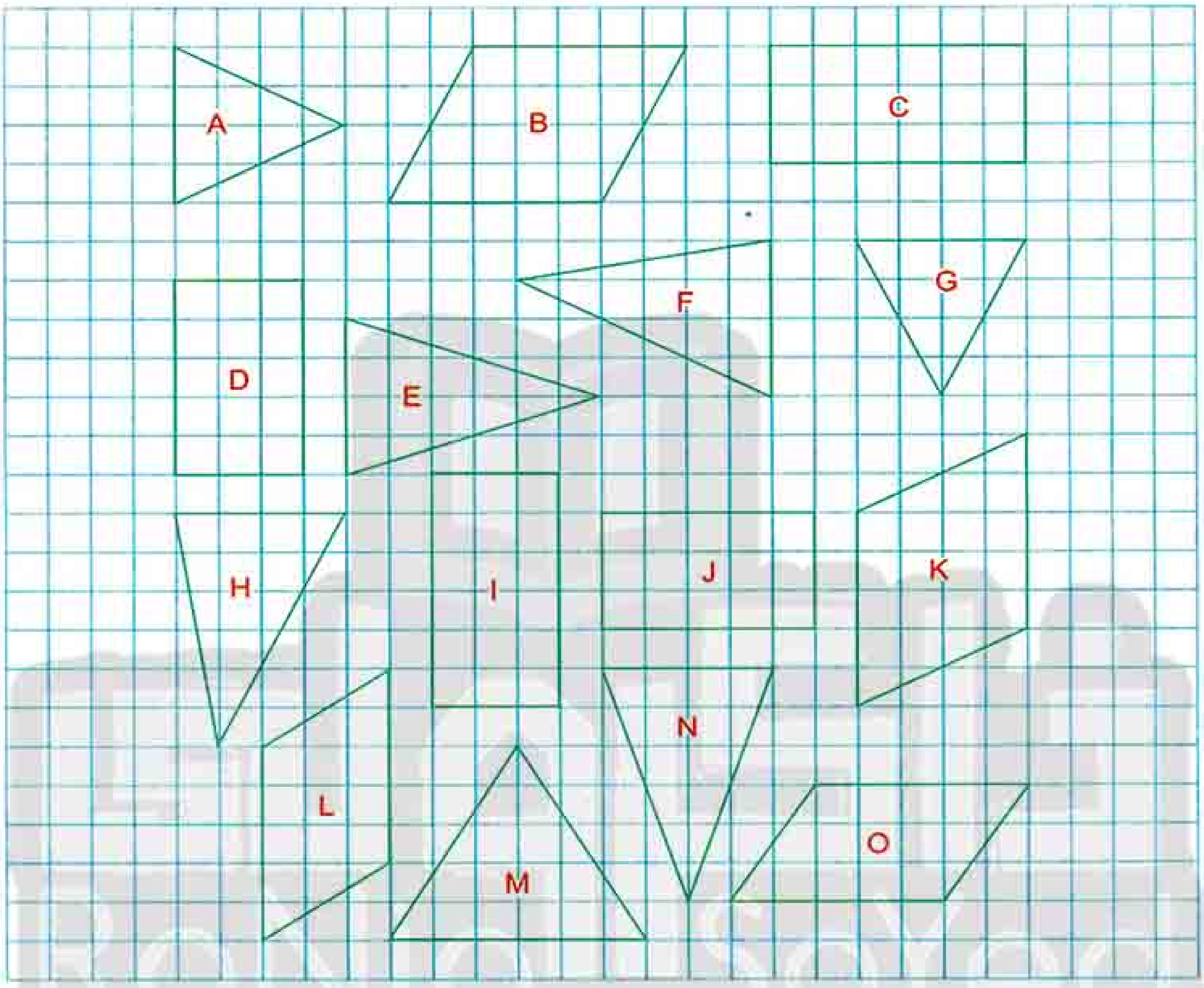


d



Lesson 1

4 Observe the following figures and complete, then use your geometric instruments to review your answer :



a The figure .... is congruent to the figure J

b The figure .... is congruent to the figure A

c The figure .... is congruent to the figure F

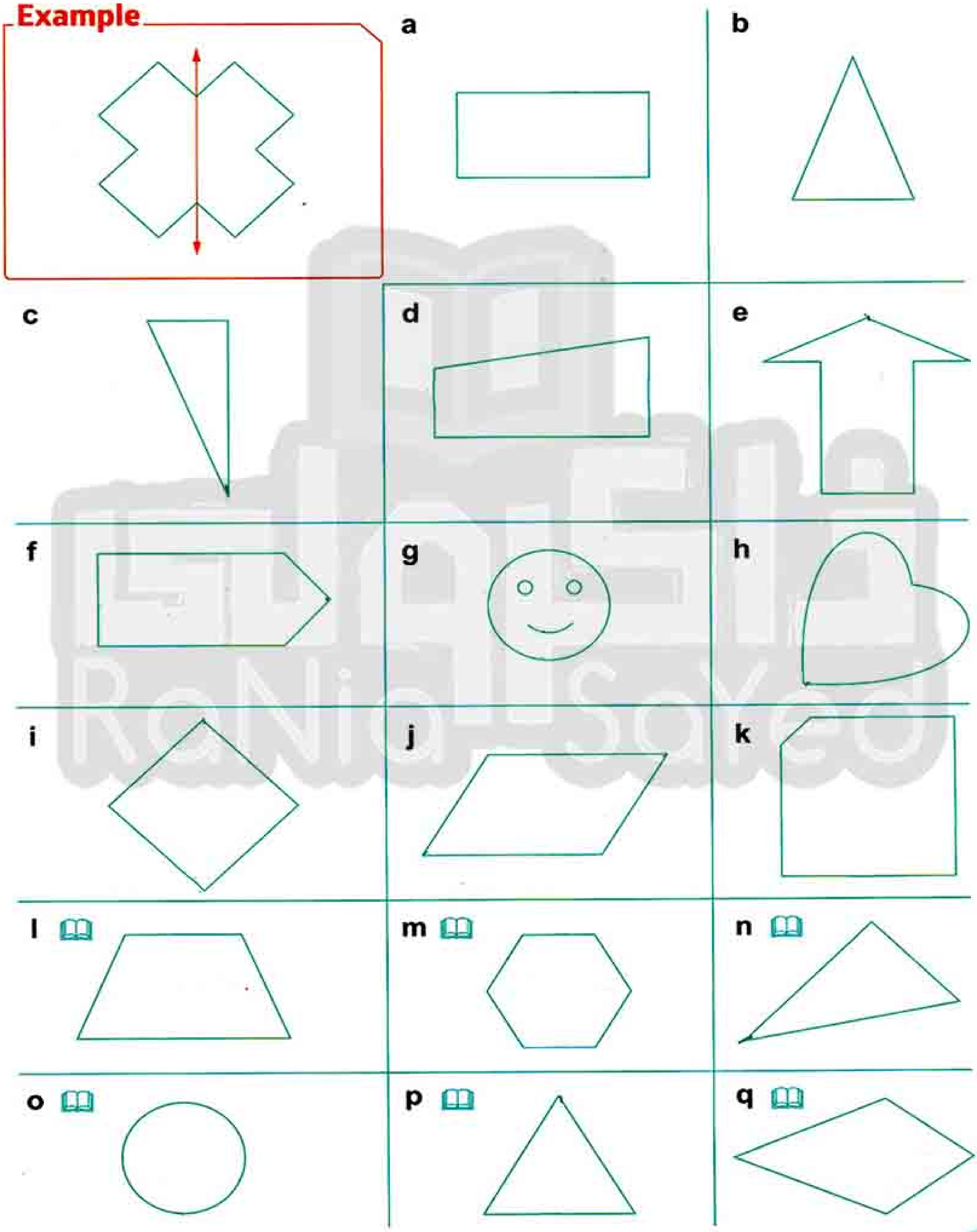
d The figure .... is congruent to the figure K

e The figure .... is congruent to the figure O

f The figure .... is congruent to the figure C

g The figure .... is congruent to the figure N

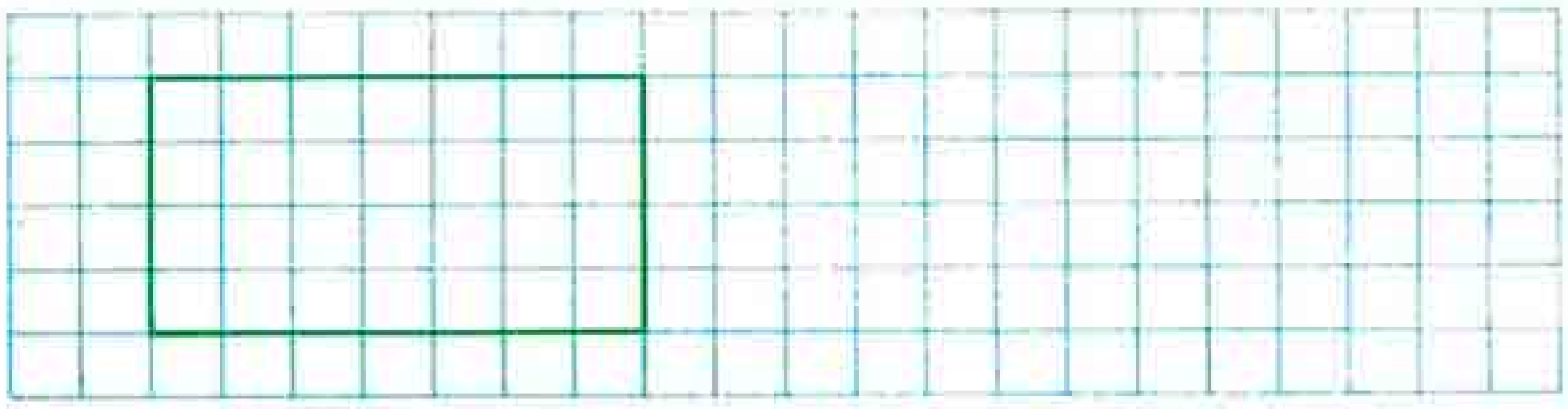
5 Draw a line in each of the following figures, to get two congruent figures if possible as in the following example :



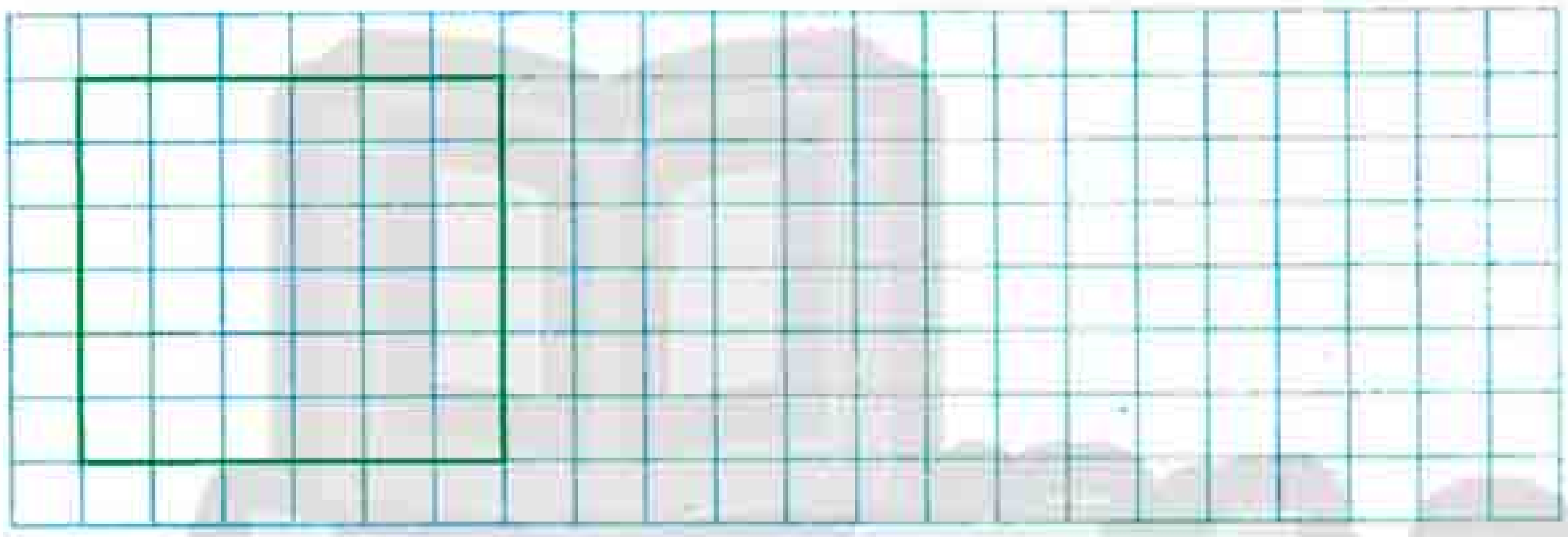
Lesson 7

6 Draw a congruent figure for each of the following figures :

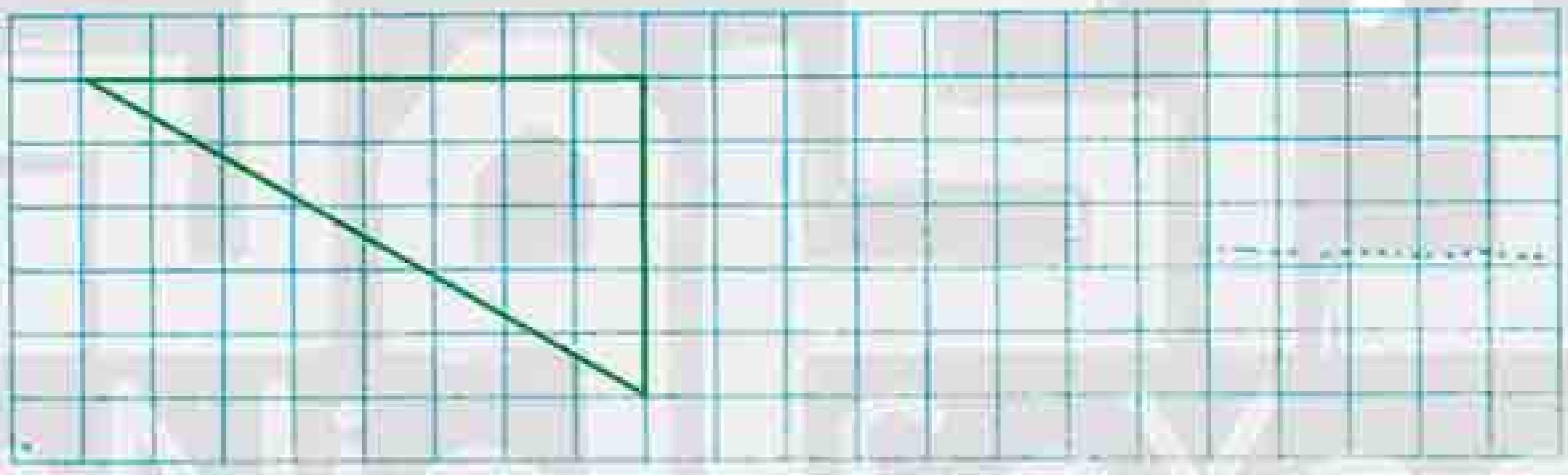
a



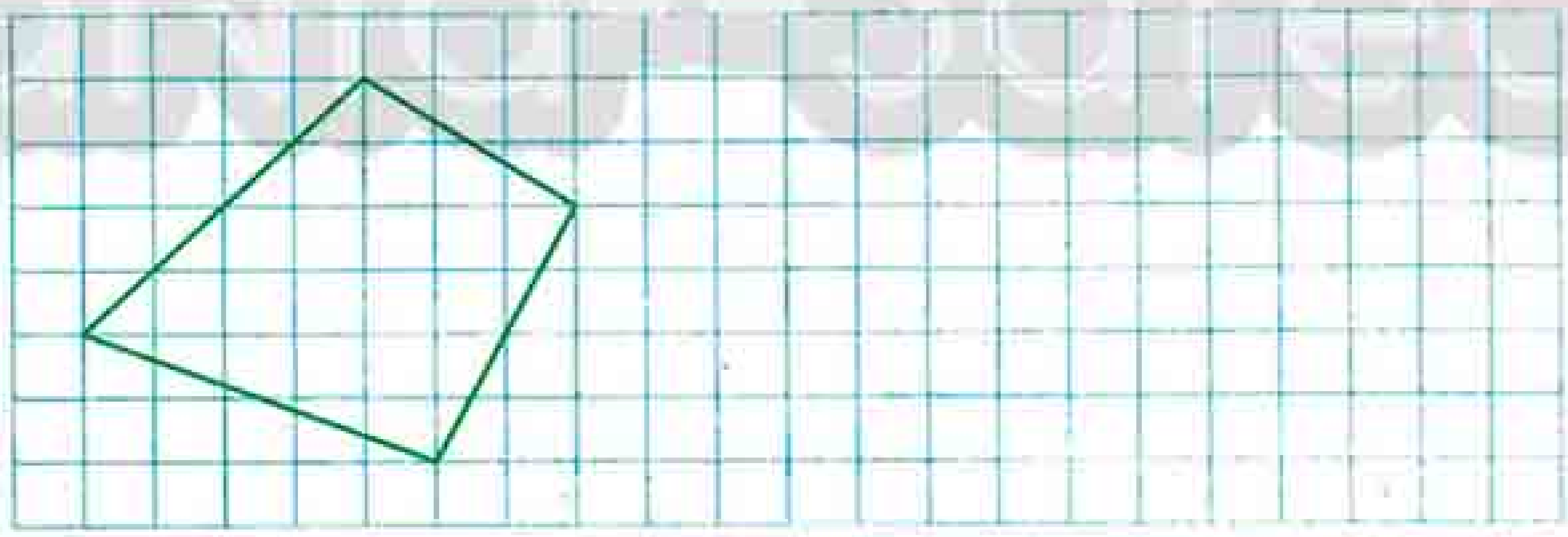
b



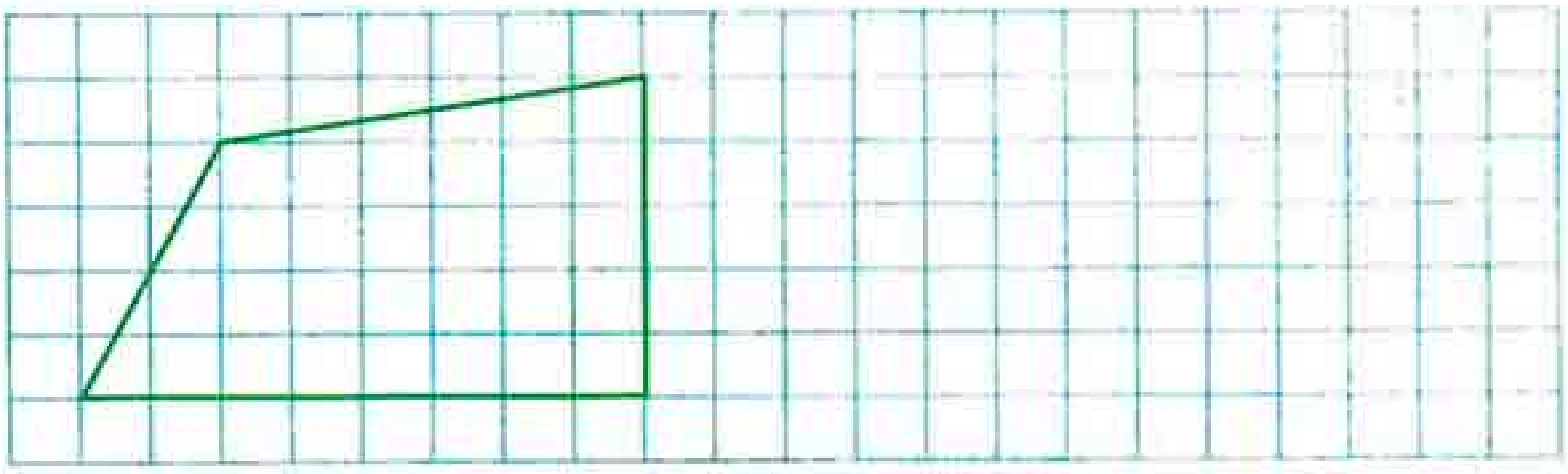
c



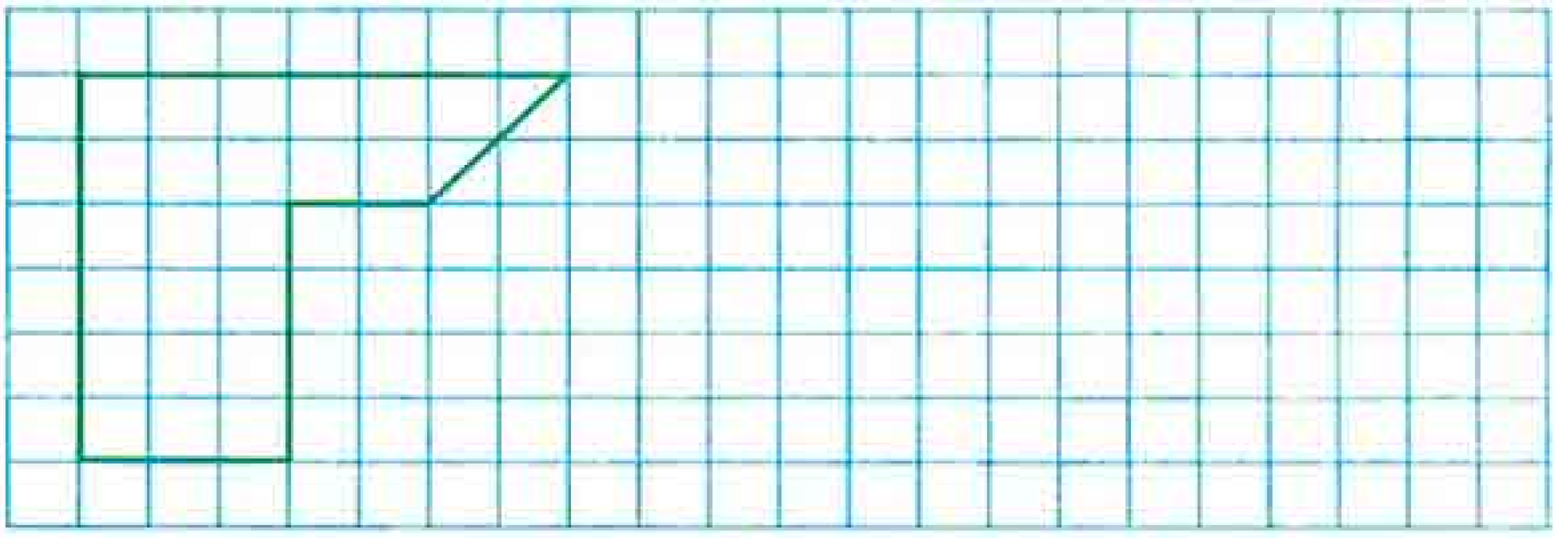
d



e



f



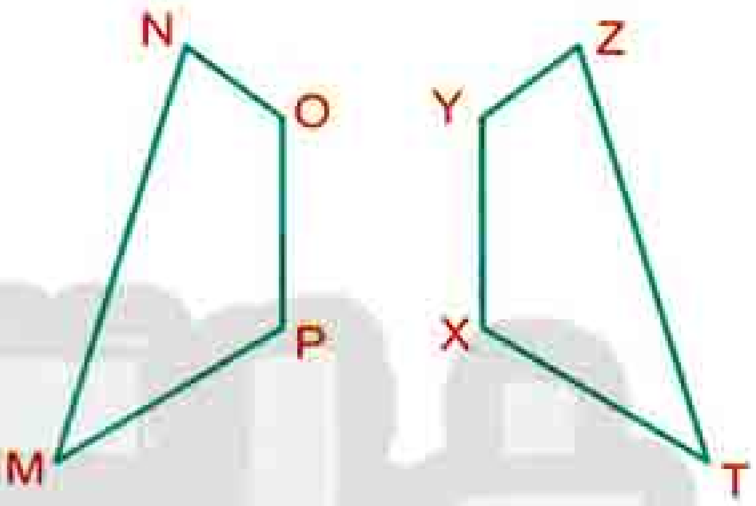
7 **If the two opposite figures are congruent , complete :**

a MN = ...   b NO = ...

c OP = ...   d PM = ...

e m (∠ M) = ...   f m (∠ N) = ...

g m (∠ O) = ...   h m (∠ P) = ...



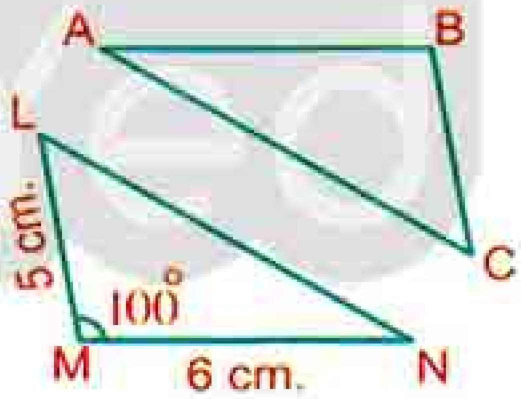
8 **In the opposite figure : if △ LMN ≡ △ CBA , complete :**

a ∠ M ≡ ....   b ∠ A ≡ ....

c ∠ C ≡ ....   d $\overline{LM}$ ≡ ....

e $\overline{MN}$ ≡ ....   f $\overline{LN}$ ≡ ....

g m (∠ B) = ...°   h BC = ... cm.

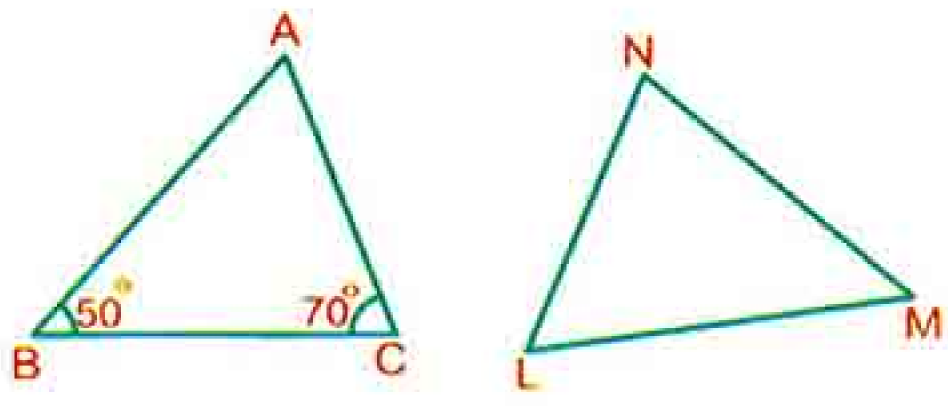


9 **In the opposite figure : if △ ABC ≡ △ LMN , complete :**

a m (∠ M) = ...°

b m (∠ N) = ...°

c m (∠ L) = ...°



Lesson 7

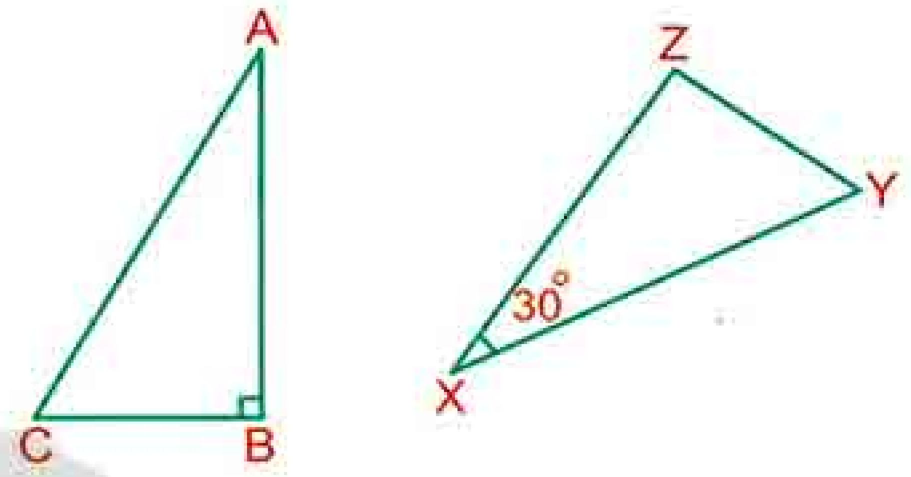
10 In the opposite figure : if Δ ABC ≡ Δ XZY , complete :

a m (∠ Z) = ...°

b m (∠ Y) = ...°

c m (∠ A) = ...°

d m (∠ C) = ...°

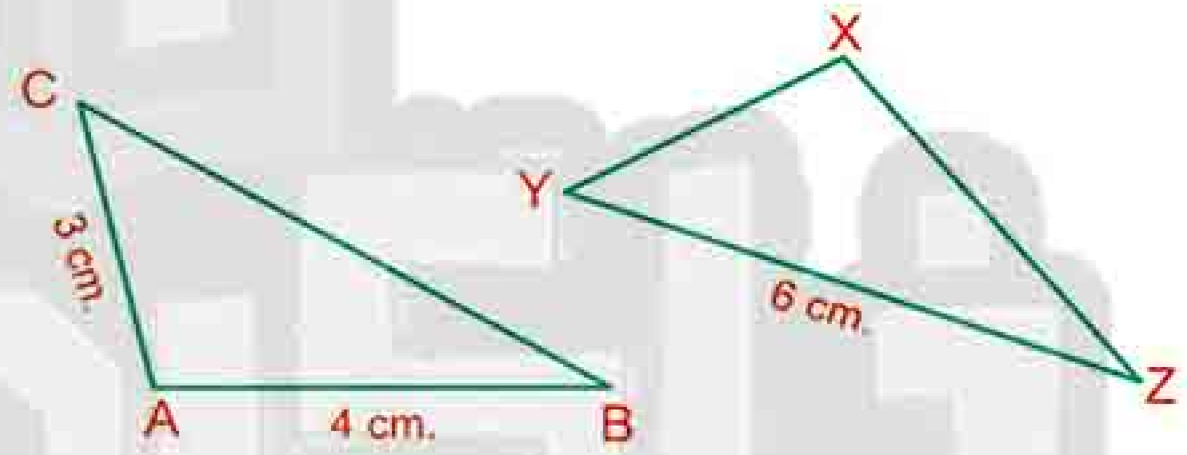


11 In the opposite figure : if Δ ABC ≡ Δ XZY , complete :

a XZ = ... cm.

b XY = ... cm.

c The perimeter of Δ ABC
= .... cm.



12 In the opposite figure , complete :

a $\overline{XY}$ ≡ ....

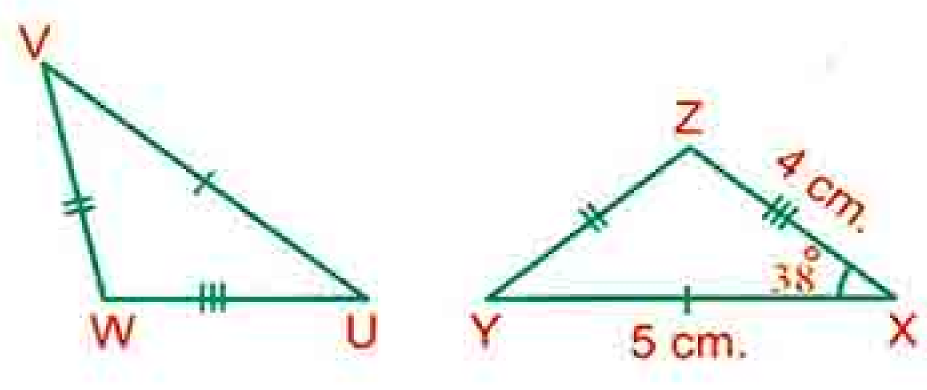
b ∠ V ≡ ....

c $\overline{WU}$ ≡ ....

d ∠ Z ≡ ....

e m (∠ U) = ...°

f UW = ... cm.



13 **Complete :**

a Two polygons are congruent if their corresponding sides are .... in length and their corresponding angles are .... in measure.

b Two squares are congruent if the side length of one of them is .... to the side length of the other.

c Two rectangles are congruent if two dimensions of one of them are .... to the two dimensions of the other.

d Any two triangles are congruent if each .... is congruent to its corresponding side in the other triangle.

e A diagonal of the rectangle divides it into two .... triangles.

f If $\triangle ABC \equiv \triangle RST$, then $\angle B \equiv \angle$ ....

g If $\triangle ABC \equiv \triangle DEF$, then $\overline{BC} \equiv$ ....

h The square of side length 4 cm. is congruent to the square whose area is .... cm^2.

i The square of side length 5 cm. is congruent to another square whose perimeter is .... cm.

---

14 **Put (✓) for the correct statement and (×) for the incorrect one :**

a Two polygons are congruent if their corresponding sides have the same length. (   )

Lesson 7

b Two polygons are congruent if their corresponding angles have the same measure. ( )

c Two squares are congruent if the side length of one of them equals the side length of the other. ( )

d Two rectangles are congruent if the two dimensions of one of them equal the two dimensions of the other. ( )

e 📖 A scalene triangle can be congruent to an isosceles triangle. ( )

f 📖 A square of side length 7 cm. can be congruent to a rectangle of dimensions 7 cm. and 5 cm. ( )

g Two triangles are congruent if each side length of one of them equals the corresponding side length of the other. ( )

h Any two equilateral triangles are congruent. ( )

i Any two squares are congruent. ( )

j Two triangles are congruent if the measures of the angles of one of them are equal to the corresponding parts of the other. ( )

Lesson 2

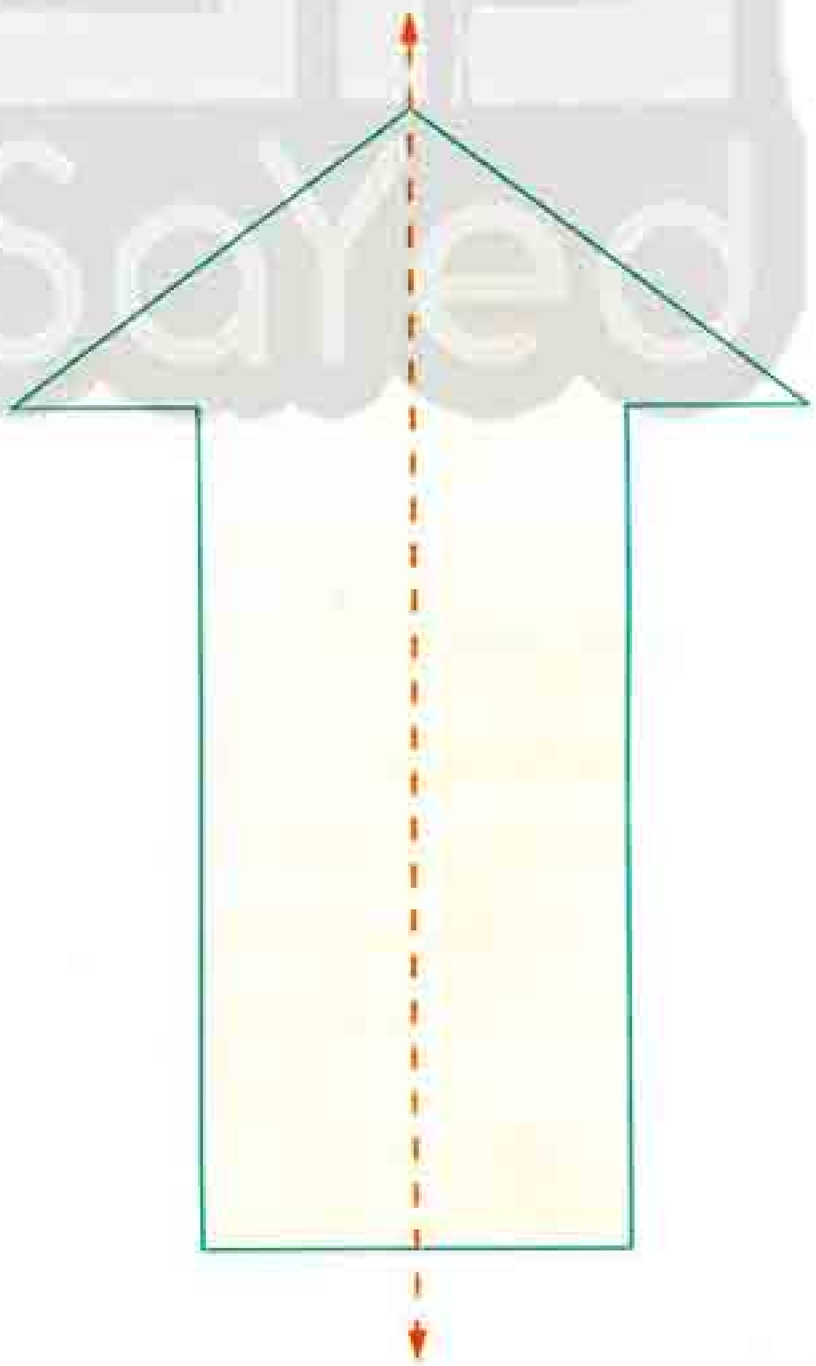
Symmetrical figures and lines of symmetry

- We say that a figure has line of symmetry if it can be folded into two congruent parts that match exactly.
- The fold line is the line of symmetry.

For example :

In the opposite figure :
Imagine that you folded the figure along the dashed line.

Then the two parts of the figure would exactly match.



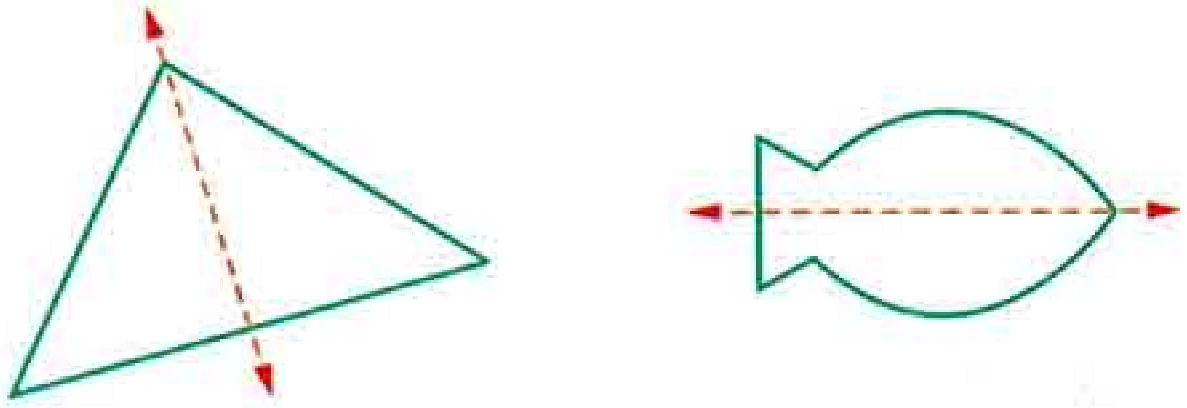
In this case :

- The dashed line is called a line of symmetry and the figure is called a symmetrical figure in relation to the dashed line.
- The two parts of the figure are congruent.

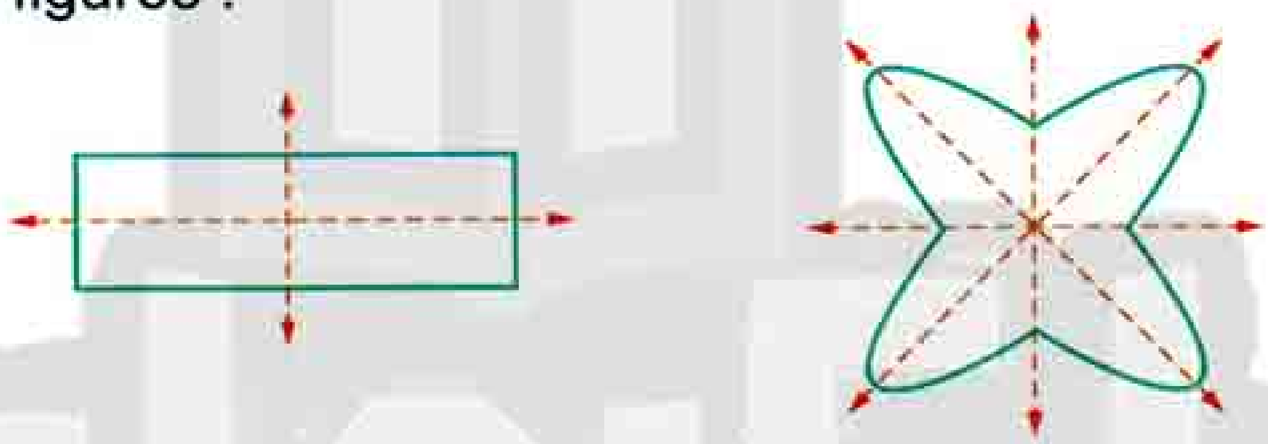
Lesson 2

Notice that :

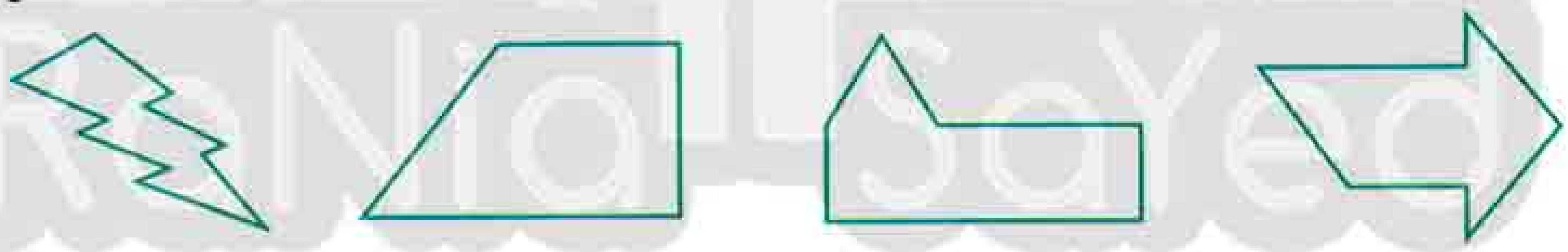
1. Some geometrical figures have only one line of symmetry as in the following figures :



2. Some geometrical figures have more than one line of symmetry as in the following figures :



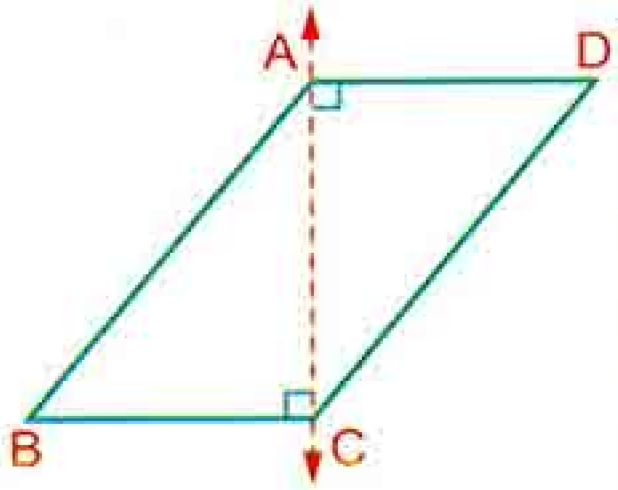
3. Some geometrical figures have no lines of symmetry as in the following figures :



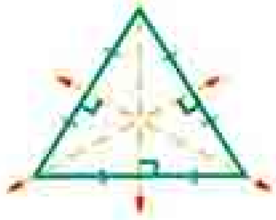
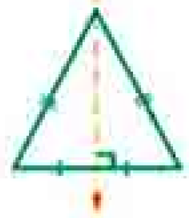
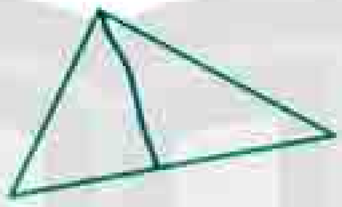
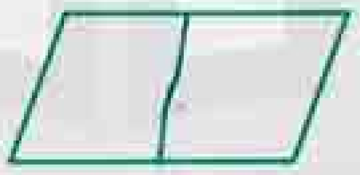
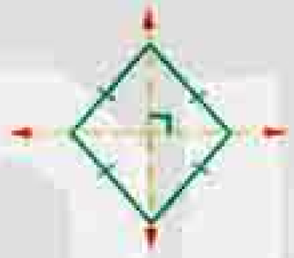
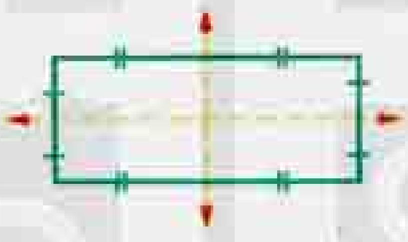
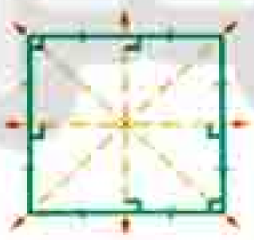
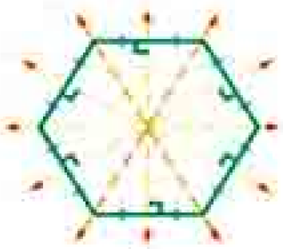
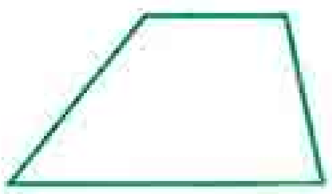
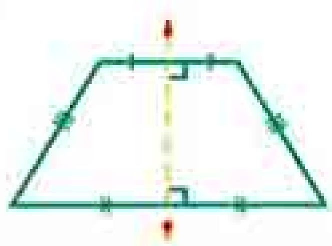
4. It is not necessary for any line, dividing a figure into two congruent parts, to be the line of symmetry of that figure.

For example :

A diagonal of the parallelogram divides it into two congruent triangles, but it is not a line of symmetry for the parallelogram.



• The following table shows the number of lines of symmetry for some geometrical figures :

The figure name	The figure	Number of axes of symmetry
Equilateral triangle		3
Isosceles triangle		1
Scalene triangle		0
Parallelogram		0
Rhombus		2
Rectangle		2
Square		4
Regular hexagon		6
Trapezium		0
Isosceles trapezium		1

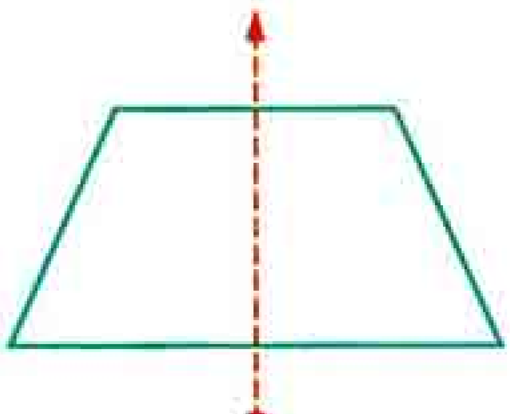
Exercise 14

Symmetrical figures and lines of symmetry

From the school book

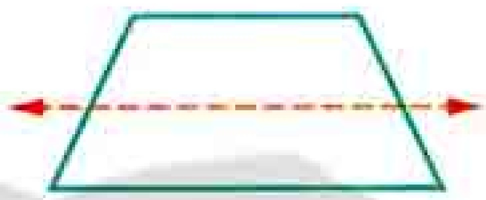
1 Is the dashed line a line of symmetry ? Write Yes or No as in the example :

Example



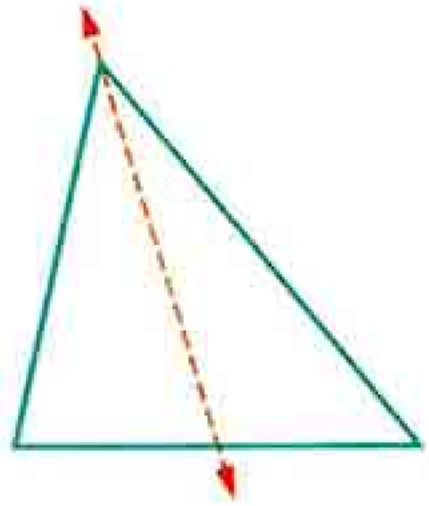
Yes

a



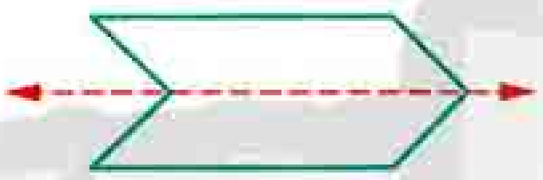
....

b



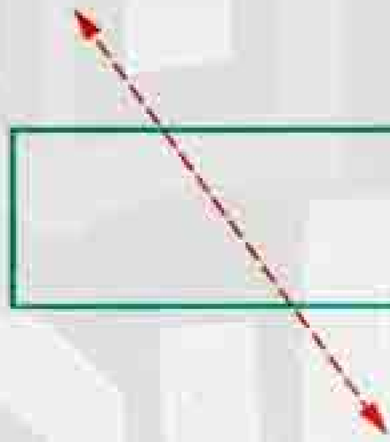
....

c



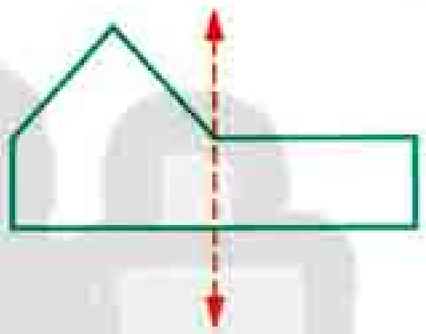
....

d



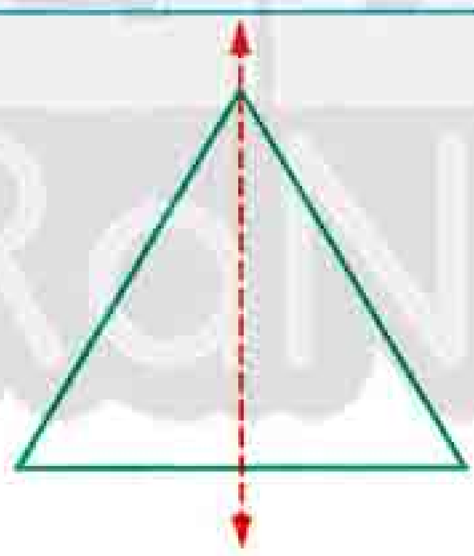
....

e



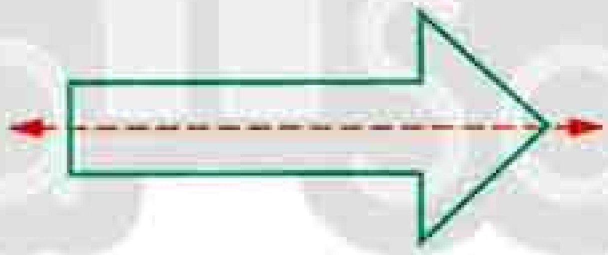
....

f



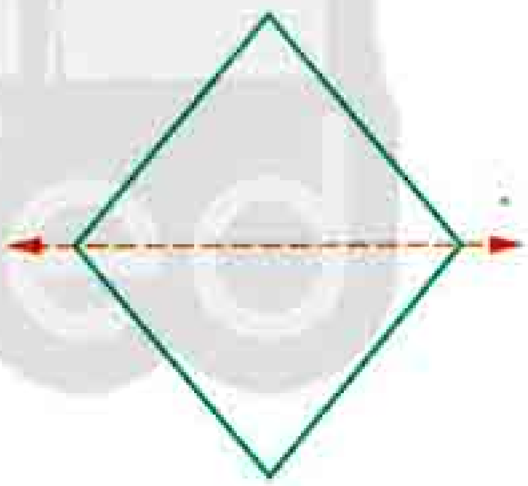
....

g



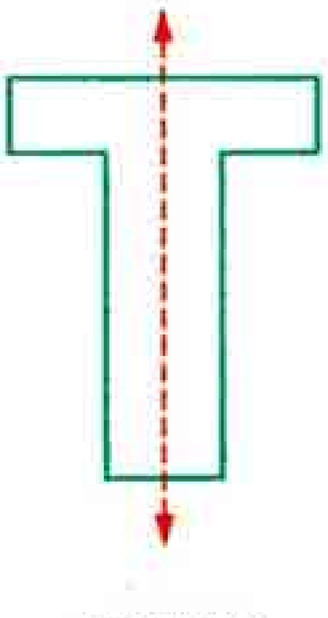
....

h



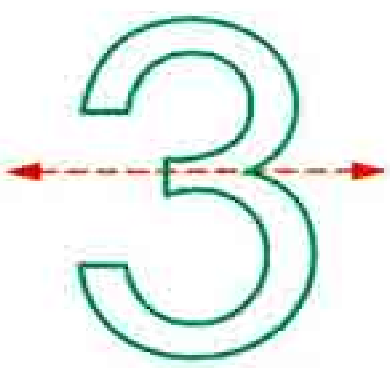
....

i



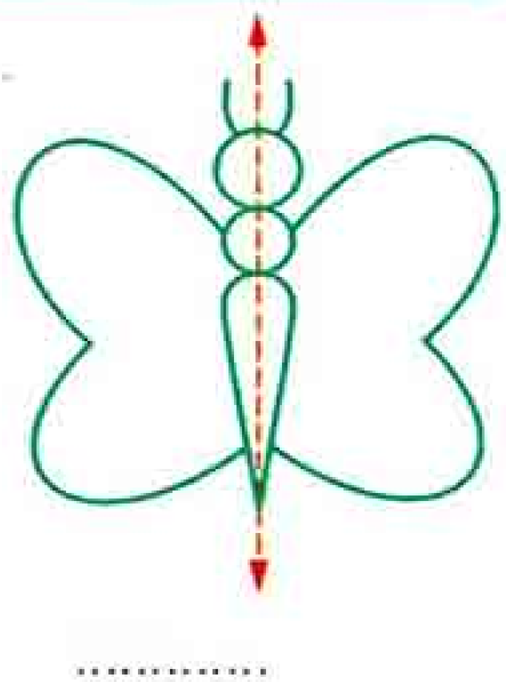
....

j



....

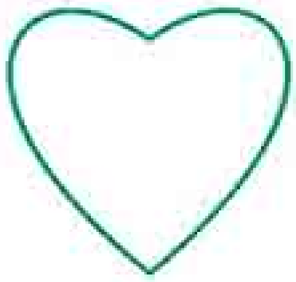
k



....

2 Does the figure have a line of symmetry ? Write Yes or No as in the example :

Example



Yes

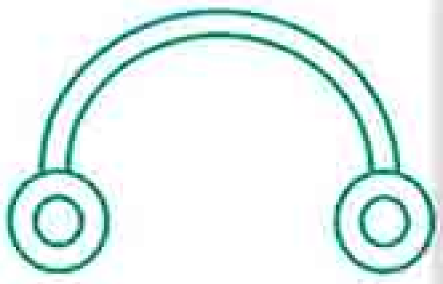
a

....

b

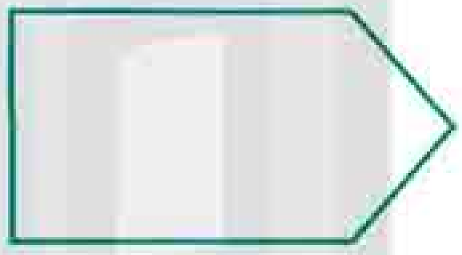
....

c



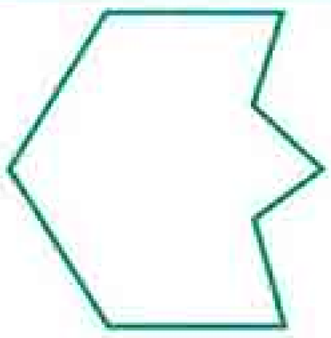
....

d



....

e

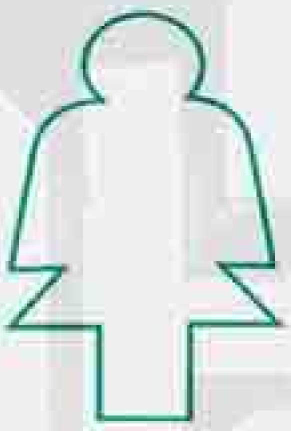


....

f

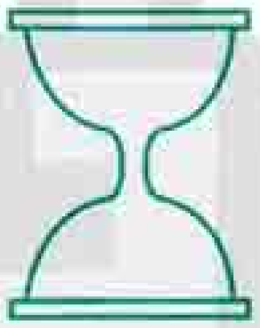
....

g



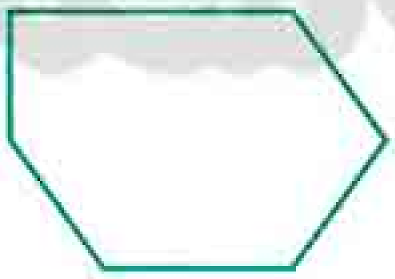
....

h



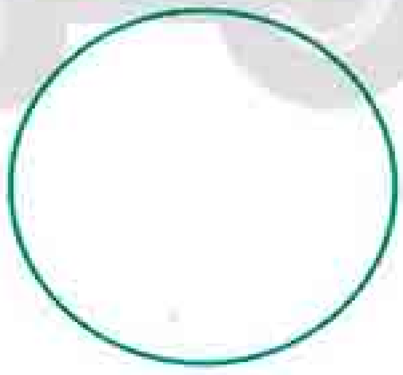
....

i



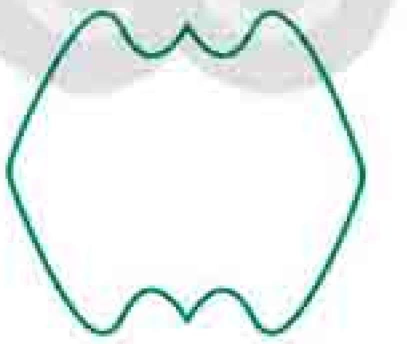
....

j



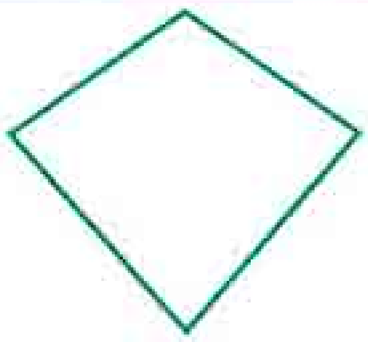
....

k



....

l

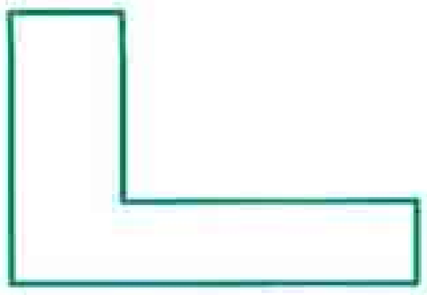


....

m

....

n

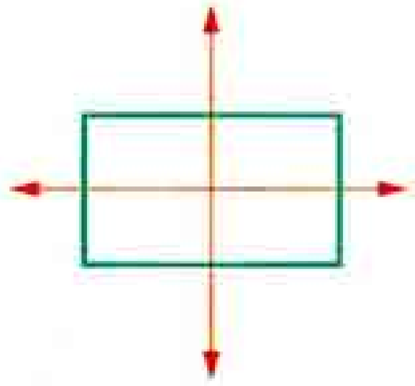


....

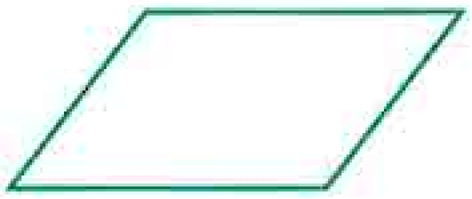
Lesson 2

3 In each of the following, if the figure is symmetrical, then draw all the lines of symmetry to it as in the example :

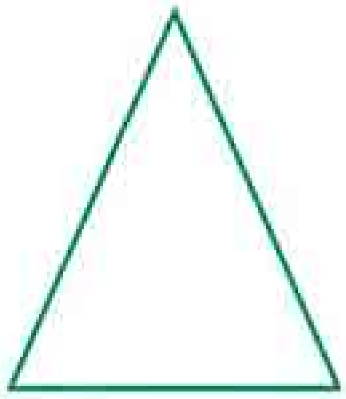
Example



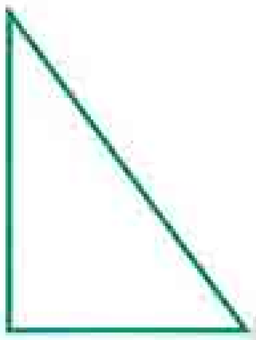
a



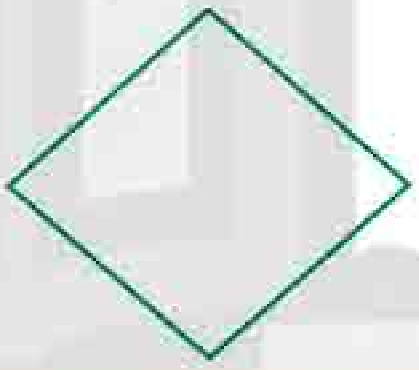
b



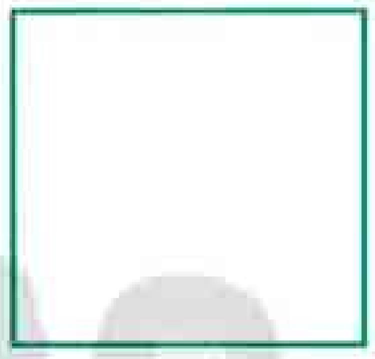
c



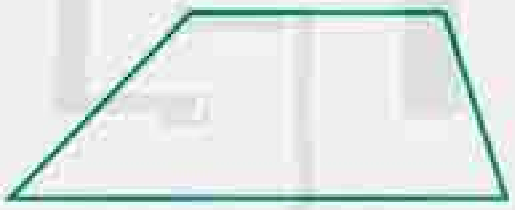
d



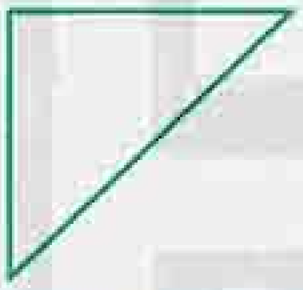
e



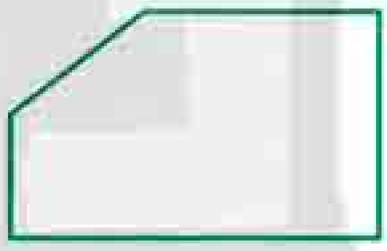
f



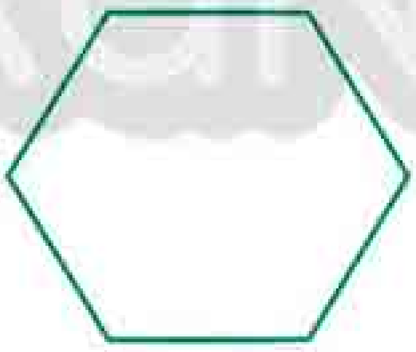
g



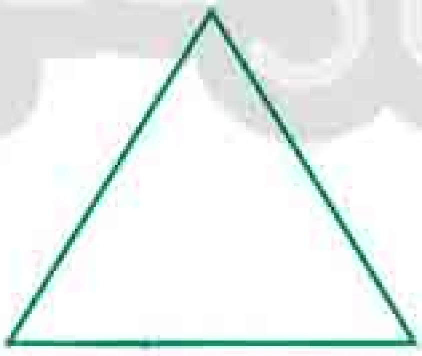
h



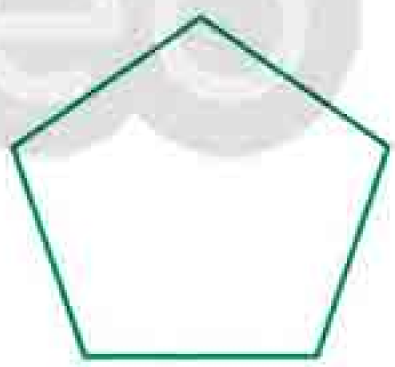
i



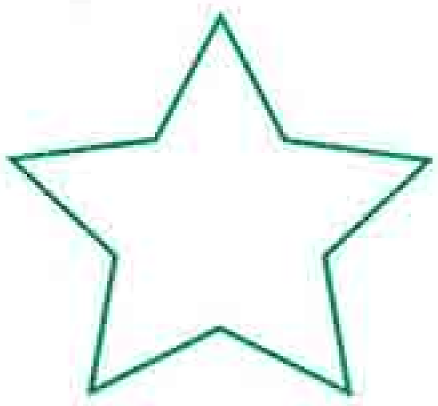
j



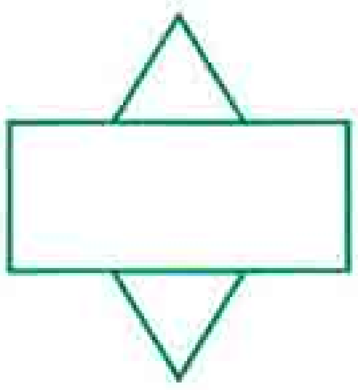
k



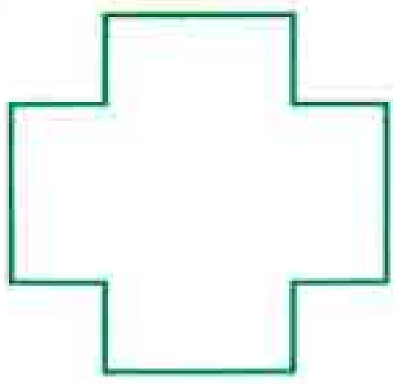
l



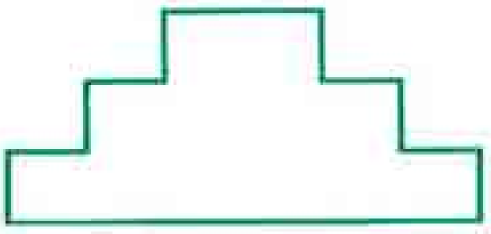
m



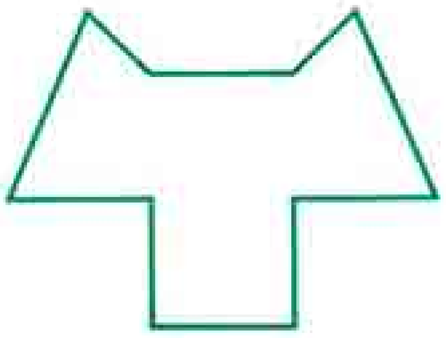
n



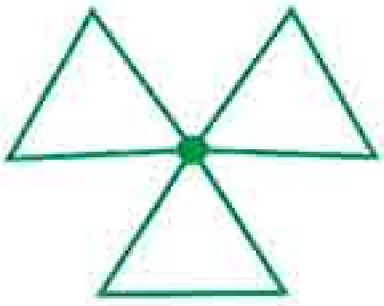
o



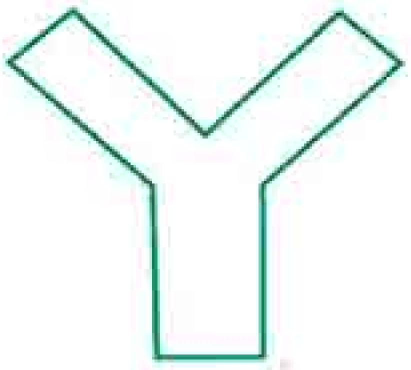
p



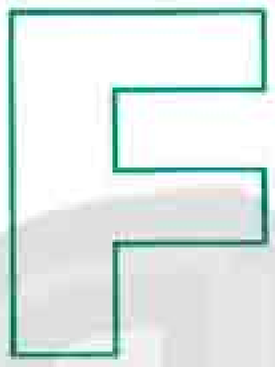
q



r



s



t

4 Join each figure to its number of lines of symmetry :

Zero

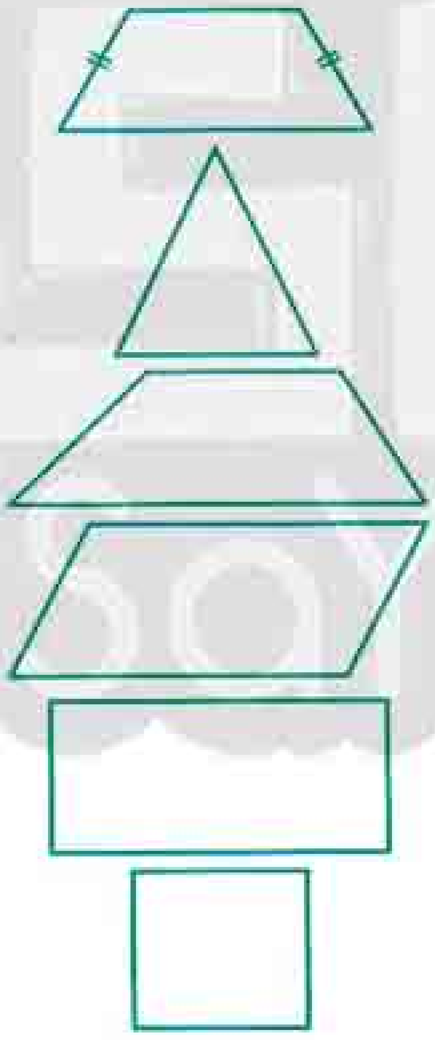
1

2

3

4

5



5 Complete the following :

a The isosceles triangle has .... line(s) of symmetry.

b The equilateral triangle has .... line(s) of symmetry.

c The isosceles trapezium has .... line(s) of symmetry.

d The square has .... line(s) of symmetry.

Lesson 2

e The rectangle has .... line(s) of symmetry.

f The rhombus has .... line(s) of symmetry.

g The regular pentagon has .... line(s) of symmetry.

h The regular hexagon has .... line(s) of symmetry.

i 📖 A diagonal of the rectangle divides it into two .... triangles, but it is not .... for the rectangle.

6 Choose the correct answer :

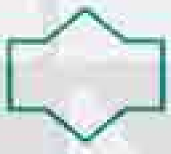
a The scalene triangle has .... line(s) of symmetry. (2 or 0 or 1)

b The parallelogram has .... line(s) of symmetry. (4 or 2 or 0)

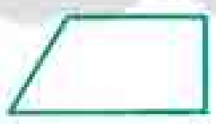
c Which of these figures has the greater number of lines of symmetry ? ....

(square or equilateral triangle or rectangle)

d This figure has .... line(s) of symmetry. (0 or 1 or 5)

e This figure  has .... line(s) of symmetry. (4 or 1 or 2)

f This figure has .... line(s) of symmetry. (0 or 2 or 1)

g This figure  has .... line(s) of symmetry. (1 or 0 or 2)

h In the opposite letters : K X B F

which ones have only one line of symmetry ? ....

(K and X or B and F or K and B)

7 📖 Put (✓) for the correct statement and (×) for the incorrect one and correct the wrong statement :

a The line of symmetry of a figure is that line dividing it into two congruent parts. (   )

b The parallelogram has four lines of symmetry. ( )

c The rectangle has four lines of symmetry. ( )

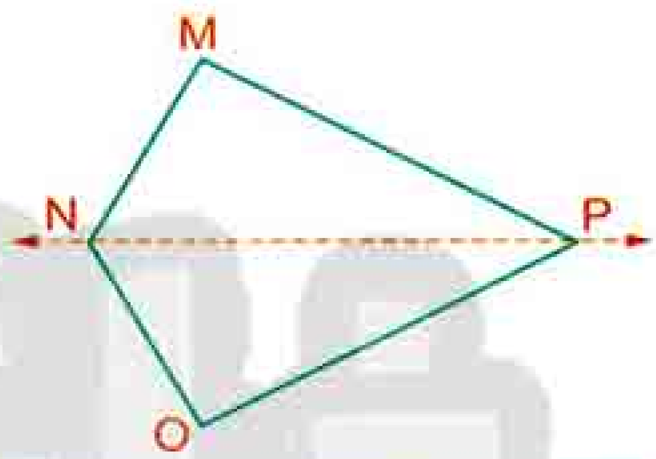
d The scalene triangle has three lines of symmetry. ( )

e The isosceles trapezium has one line of symmetry. ( )

f The square has four lines of symmetry. ( )

g The rhombus has four lines of symmetry. ( )

8 **In the opposite figure , the dashed line is a line of symmetry . Complete :**

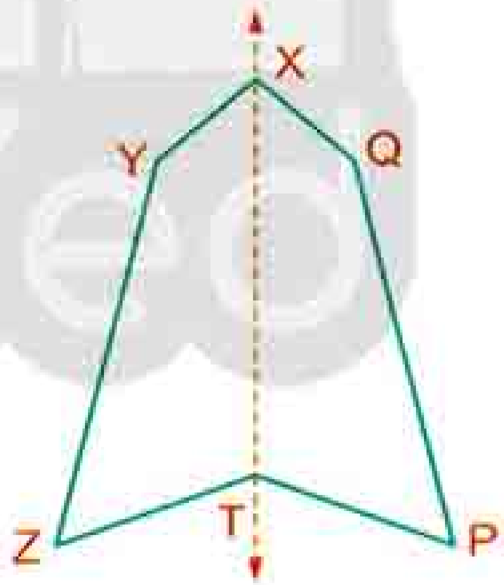


a MN = ...

b OP = ...

c m (∠ NOP) = m (∠ ....)

9 **In the opposite figure , the dashed line is a line of symmetry . Complete :**



a XY = ... **b** QP = ...

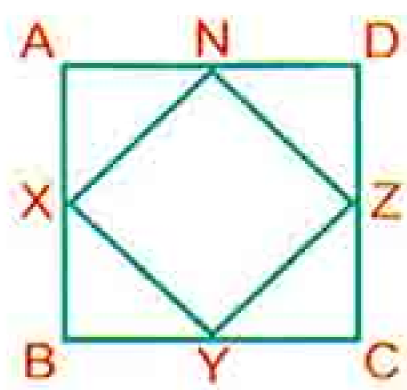
c ZT = ...

d m (∠ XYZ) = m (∠ ....)

e m (∠ QPT) = m (∠ ....)

f m (∠ ZTX) = m (∠ ....)

10 **In the opposite figure, ABCD is a square with midpoints of its sides X, Y, Z and N, notice the figure, then answer the following questions :**



a Draw a common line of symmetry for the two squares.

b How many common lines of symmetry are there for the two squares ? (2 or 4 or 6)

Lesson 3

Visual patterns

What is a pattern ?

A pattern is a sequence of numbers, symbols or figures arranged according to a certain system or rule.

For example :

- 0 , 3 , 6 , 9 , 12 , 15 , ...

  (in this pattern, we add 3 to the last number to get the next number)

- □ □ ▽ □ □ ▽ □ □ ▽ ...

  (in this pattern, we repeat the sequence □ □ ▽)

- ♥ ♥ ○ ◆ ○ ♥ ♥ ○ ◆ ○ ♥ ♥ ○ ◆ ○ ...

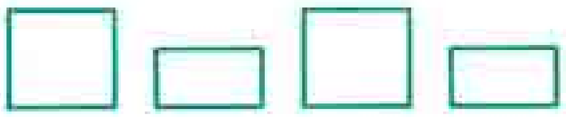
  (in this pattern, we repeat the sequence ♥ ♥ ○ ◆ ○)

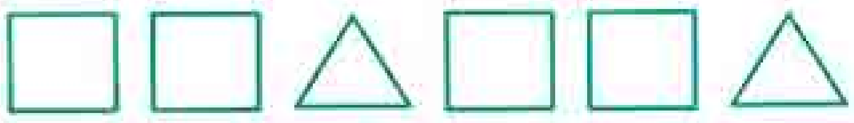
Exercise 15

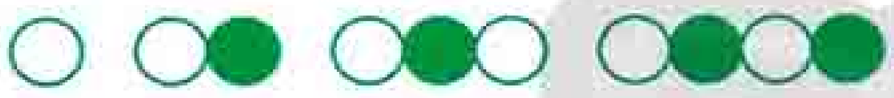
Visual patterns

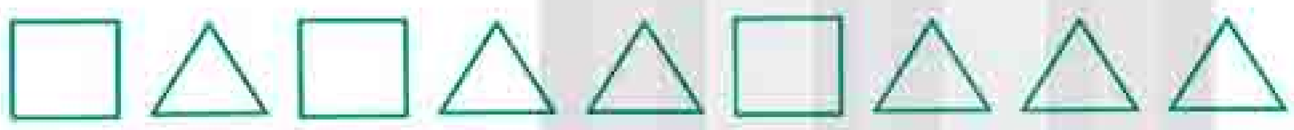
From the school book

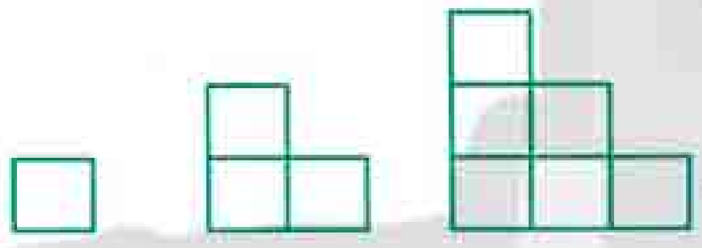
1 Discover the rule and find the next one :

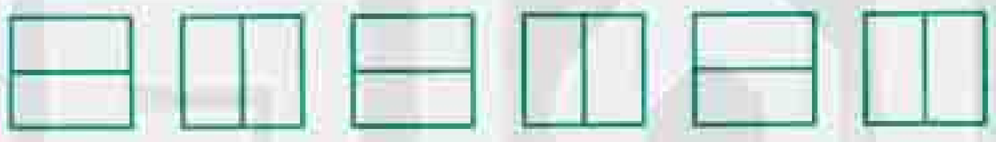
a  ....

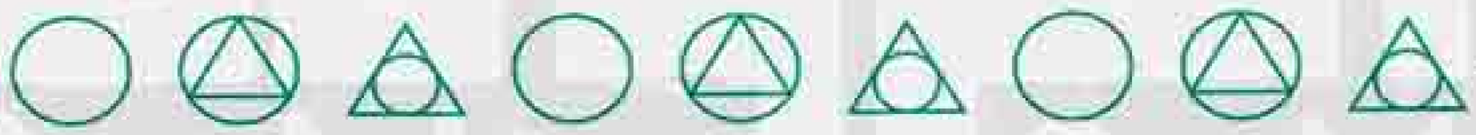
b  ....

c  ....

d  ....

e  ....

f  ....

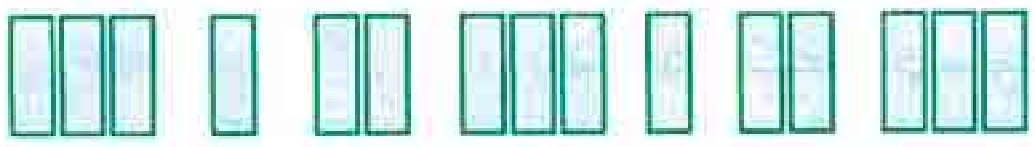
g  ....

h ABC ABC ABC ....

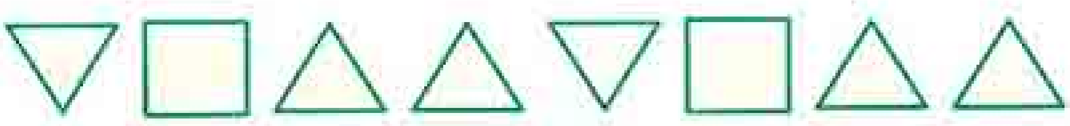
i SSTASSTASS ....

j AB , ABB , ABBB , AB , ABB , ... , ... , ...

k R M M C R R M M C R R M M C R ....

l  ....

m A , Z , B , Y , C , X , ... , ...

n  ....

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Lesson 3

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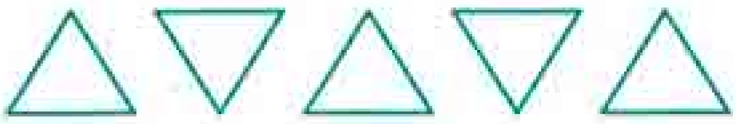
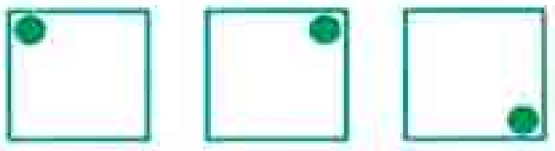
q  ....

r  ....

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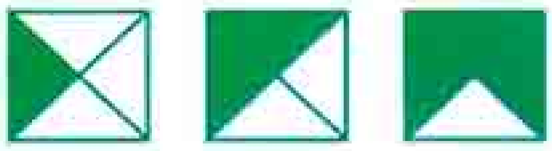
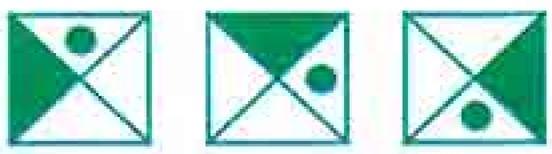
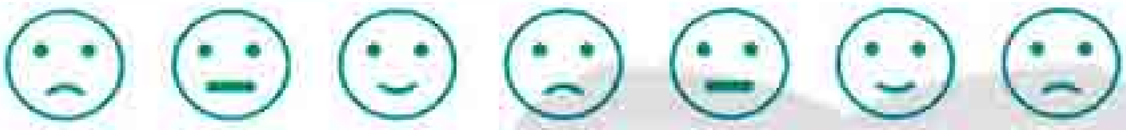
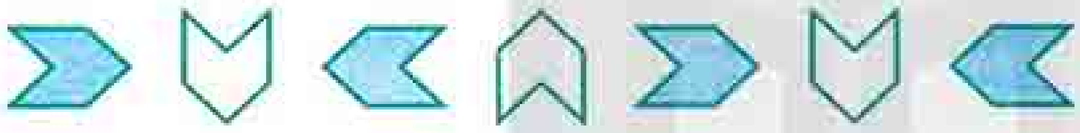
t  ....

u  ....

v  ....

w  ....

x ....

2 Discover the rule , then complete :

a 6 , 13 , 20 , 27 , ... , ...

b 5 , 9 , 13 , 17 , ... , ...

c 1 , 2 , 4 , 8 , 16 , ... , ...

d 1 , 3 , 9 , 27 , ... , ...

e 2 , 7 , 4 , 9 , 6 , 11 , ... , ...

f 12 , 9 , 6 , ... , ...

g $\frac{1}{3}$, $\frac{2}{9}$, $\frac{4}{27}$, ... , ...

3 Discover the rule , then complete :

a 17.1 , 17.2 , 17.3 , ... , ... , ...

b 13.2 , 13.4 , 13.6 , ... , ... , ... , ...

c 16.4 , 16.8 , 17.2 , ... , ... , ...

d 10 , 9.6 , 9.2 , ... , ... , ...

e 1.2 , 2.3 , 3.4 , ... , ... , ...

f 2.2 , 3.3 , 4.4 , ... , ... , ...

g 12.3 , 23.4 , 34.5 , ... , ... , ...

Activities from the school book

Activity 1

In each of the following figures, discover the pattern, then complete by drawing one figure that follows the same pattern :

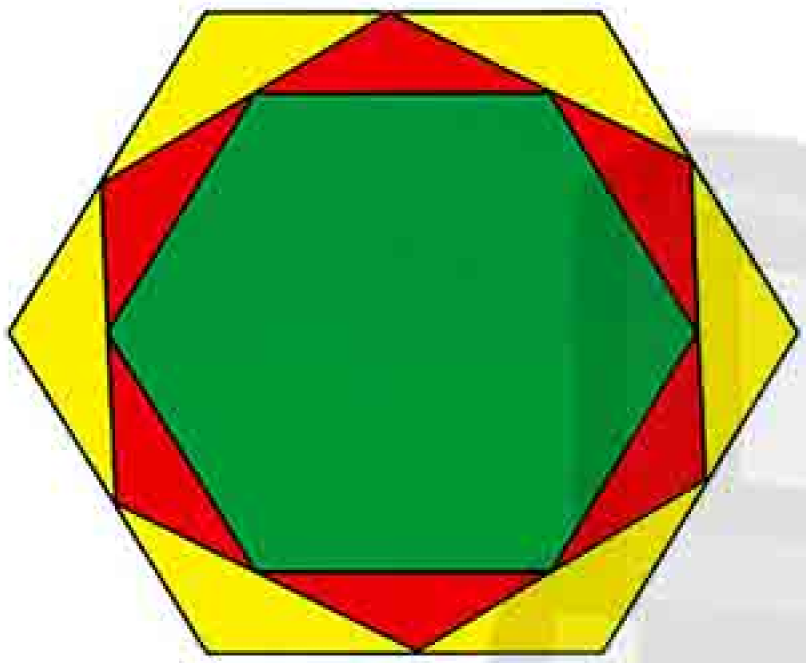
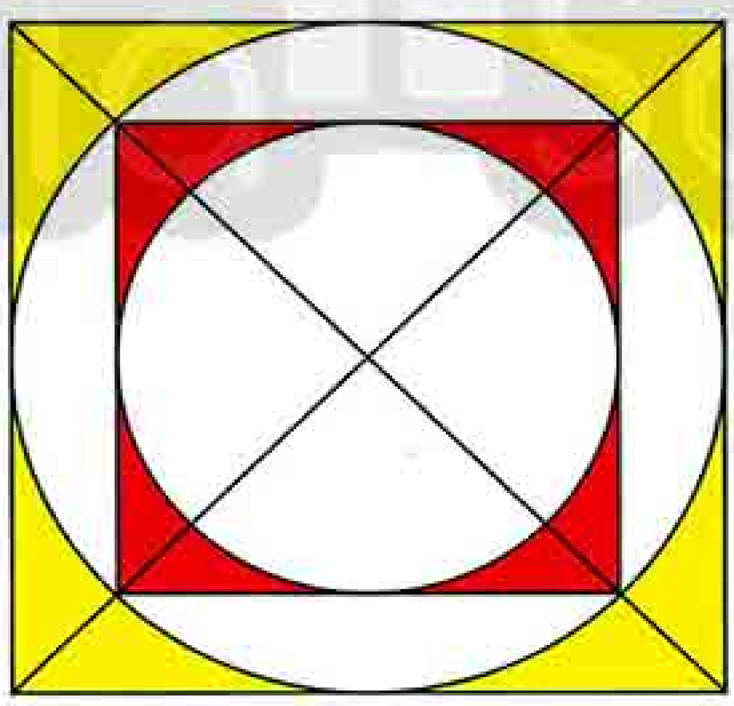


Figure (1)

Figure (2)

Activity 2

Discover the pattern, then draw two figures and complete colouring according to the pattern :



GENERAL EXERCISE
From the school book

Unit Two " Geometry "

1 Choose the correct answer from those given :

1 The number of the lines of symmetry of the rectangle = ...

a. zero b. 4 c. 2 d. 8

2 The number of lines of symmetry of the isosceles triangle is ....

a. 1 b. 2 c. 3 d. 4

3 There are .... lines of symmetry of the square.

a. four b. three c. two d. one

4 The number of lines of symmetry of the rhombus is ....

a. four b. three c. two d. one

5 The isosceles trapezium has .... line(s) of symmetry.

a. 3 b. 2 c. 1 d. 4

2 Complete each of the following :

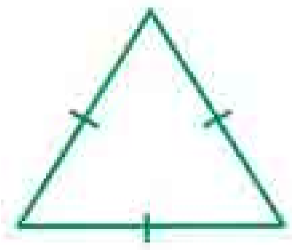
1 The two squares are congruent if the side length of one of them ....

2 The two polygons are congruent if their corresponding sides are .... and their corresponding angles are ....

3 The number of lines of symmetry of the equilateral triangle = ...

4 The rhombus is a .... figure , its sides are ....

5 In the opposite figure :
The number of lines of symmetry equals ....



6 10 , 9.6 , 9.2 , ... , ...

7 There are .... lines of symmetry in the square.

3 Put the suitable relation (< , > or =) :

1 The number of lines of symmetry in the square ☐ the number of lines of symmetry in the rectangle.

2 The number of lines of symmetry of the square ☐ the number of lines of symmetry of the rhombus.

4 Put (✓) for the correct statement and (×) for the incorrect one :

1 It is possible that an acute-angled triangle is congruent to a right-angled triangle. ( )

2 The parallelogram has four lines of symmetry. ( )

3 It is not enough that the two polygons are congruent if the corresponding sides are equal in length only. ( )

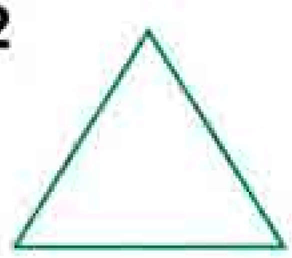
4 The square has 4 lines of symmetry. ( )

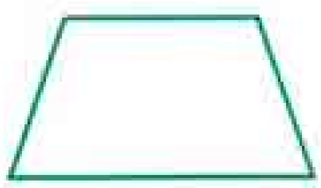
5 20 , 17 , 14 , 11 is a pattern of decreasing by 3 ( )

6 The rectangle has four lines of symmetry. ( )

5 Draw the lines of symmetry of each of the following shapes :

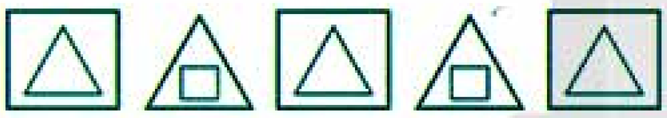
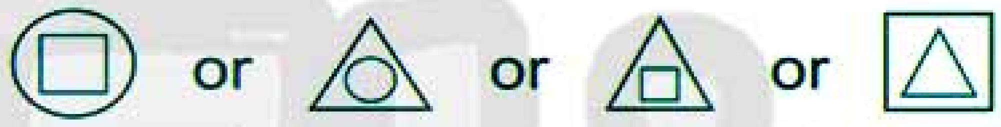
1

2


3


Test on Unit Two

1 Choose the correct answer from the given ones :

1. The rhombus has ……… lines of symmetry. (4 or 2 or 1 or 0)
2. If $\Delta ABC \equiv \Delta XYZ$, then $\overline{AB} \equiv$ ……… ($\overline{XY}$ or $\overline{YZ}$ or $\overline{XZ}$ or $\overline{BC}$)
3. If the polygon ABCD ≡ The polygon LMNO ,
   then ∠ N ≡ ∠ ……… (A or B or C or D)
4. The parallelogram has four lines of symmetry. (✓ or ✗)
5.  ……… (in the same pattern)
   ()
6. The number of lines of symmetry of the isosceles triangle is ………
   (1 or 2 or 3 or 4)
7. The square of side length 7 cm. is congruent to another square whose perimeter is ……… cm. (7 or 14 or 28 or 35)
8. The number of lines of symmetry of the square ▭ the number of lines of symmetry of the rectangle. (> or = or <)

2 Complete each of the following :

9. Two polygons are congruent if their corresponding ……… are equal in length and their corresponding angles are ……… in measure.
10. $\frac{1}{3}$, $\frac{2}{9}$, $\frac{4}{27}$, ……… , ……… (in the same pattern)
11. The isosceles trapezium has ……… line(s) of symmetry.
12. If $\Delta ABC \equiv \Delta XYZ$, then AC = ………

TEST

3 Answer the following :

13 **In the opposite figure :**

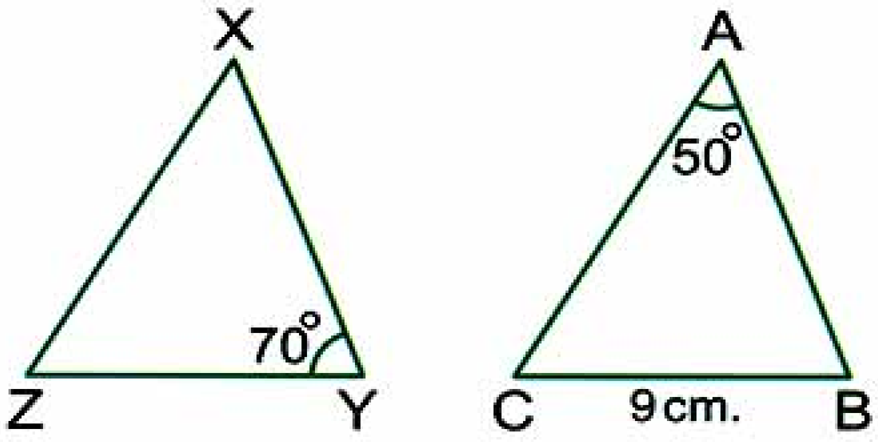
If $\Delta ABC \equiv \Delta XYZ$, then complete :

a. $\overline{AB} \equiv$ ....

b. m (∠ C) = ...°

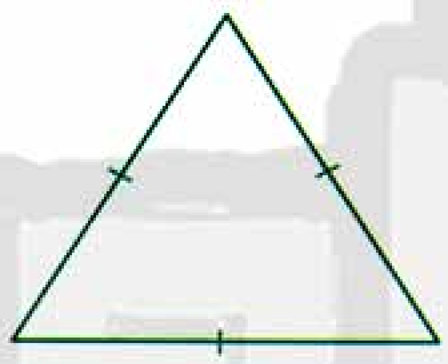
c. $\overline{ZY} \equiv$ ....

d. ZY = ... cm.

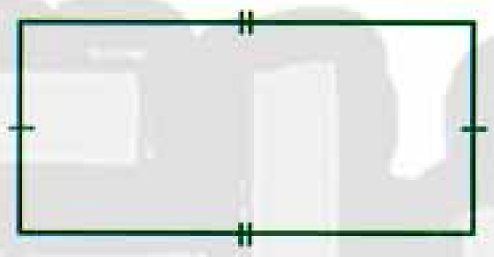


14 **Draw the lines of symmetry of the following shapes :**

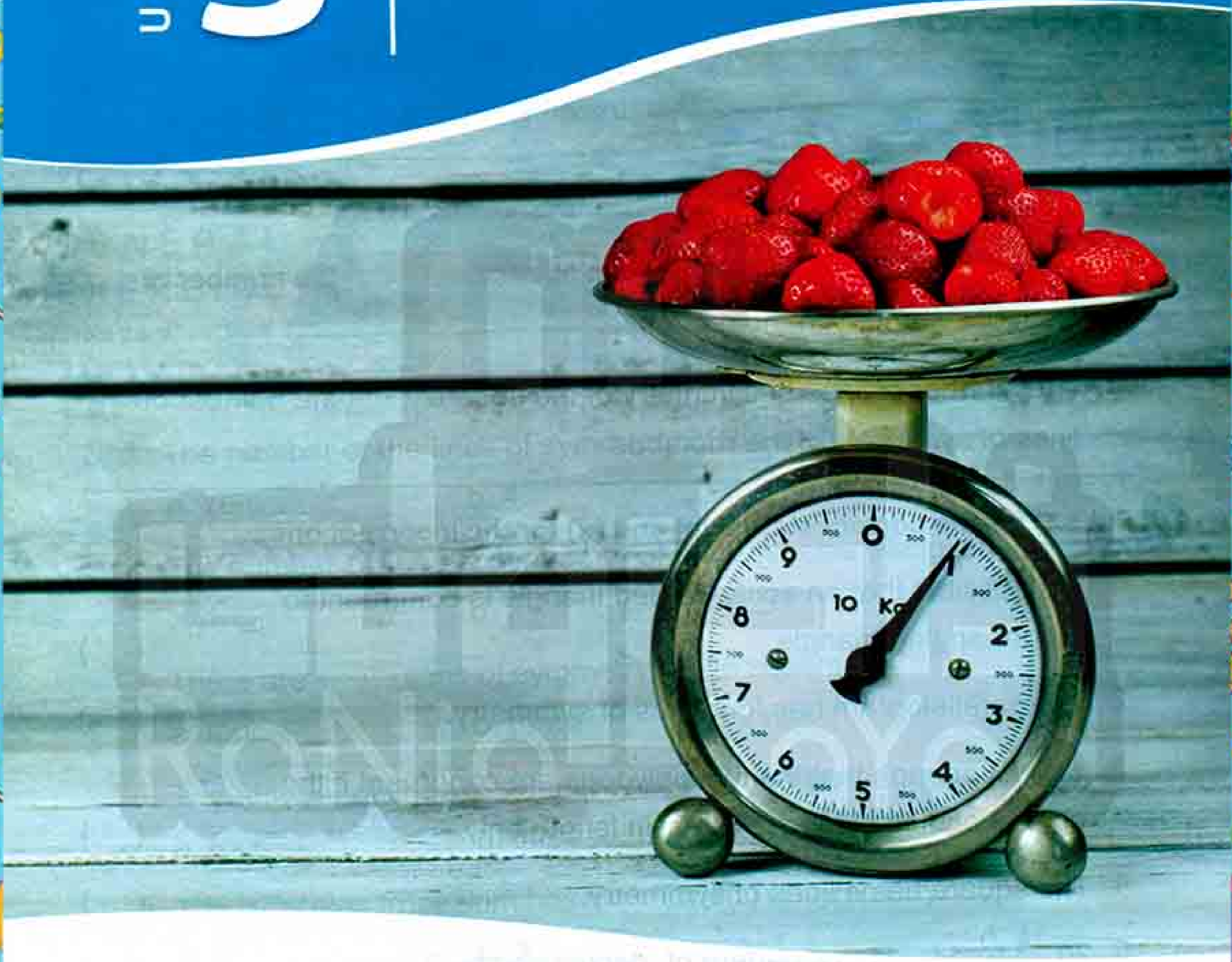
a.



b.



UNIT 3 Measurement



Lessons of the unit :

1. Capacity.
2. Weight.
3. Time.

- Activities.
- General exercise.

Lesson 1

Capacity

• In our daily life , we usually deal with capacity.

For example, we say that :

The capacity of a bottle of cooking oil is 1 litre.

The capacity of a bottle of juice is 2 litres.

The capacity of a bucket is 10 litres.

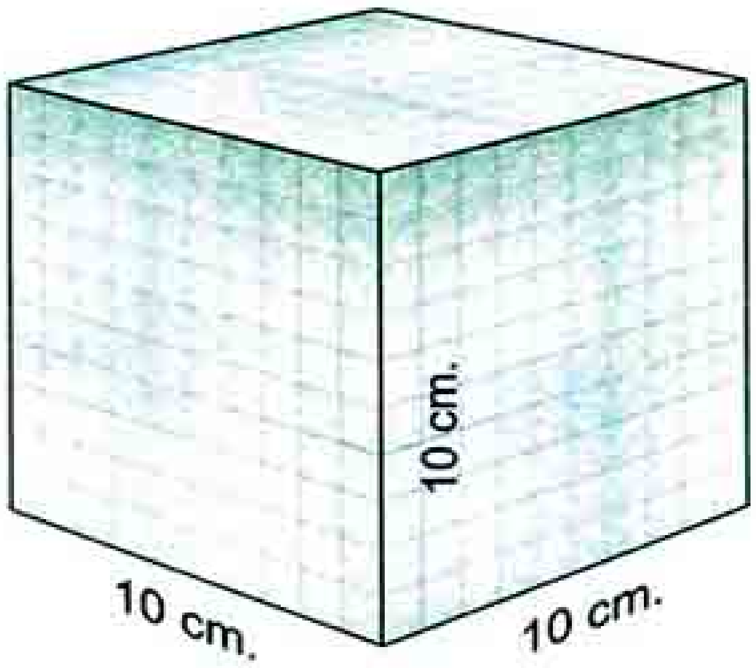
The capacity of a carton of milk is 1 litre.

Lesson 1

- Capacity is usually measured in litre (L) and millilitre (mL)

What is a litre and what is a millilitre ?

- The litre is the capacity of a cube-shaped container of 10 cm. side length.



1 litre = 1000 centimetre^3

Since 10 centimetres = 1 decimetre

, therefore 1 litre = 1 decimetre^3

- The millilitre is the capacity of a cube-shaped container of 1 cm. side length.

1 millilitre = 1 centimetre^3

Notice that :

The cubic decimetre is symbolized by 1 dm^3.
The cubic centimetre is symbolized by 1 cm^3.

What is the relation between litres and millilitres ?

1 litre = 1 000 millilitres

Notice that :

$\frac{1}{2}$ L = 500 mL , $\frac{1}{4}$ L = 250 mL and $\frac{3}{4}$ L = 750 mL

Converting units

L (dm^3) → × 1 000 → mL (cm^3)
mL (cm^3) → ÷ 1 000 → L (dm^3)

For Example

- 3 litres = 3 × 1 000 = 3 000 millilitres.
- 5 000 millilitres = 5 000 ÷ 1 000 = 5 litres.
- 9 740 millilitres = 9 740 ÷ 1 000 = 9.74 litres.

Exercise 16 Capacity

From the school book

1 Arrange the following objects from the smallest capacity to the greatest capacity as in the example :

Example

1

3

2

a

....

....

....

b

....

....

....

c

....

....

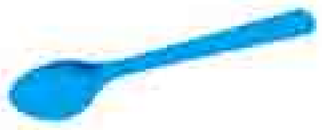
....

Lesson 1

d

....

....

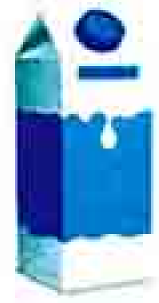


....

e

....

....



....

2 Choose the better estimate of capacity as in the following example :

Example

(5 mL) or 5 L

a

250 L or 250 mL

b

8 L or 8 mL

c

150 mL or 150 L

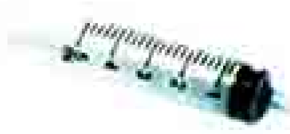
d

1 mL or 1 L

e

5 mL or 5 L

f



1 mL or 1 L

g

450 L or 450 mL

h

10 L or 10 mL

3 Choose the suitable measuring unit for each of the following.
Write litre or millilitre as in (a) :

a Medicine in a spoon (millilitre)
b Juice in a glass (..............)
c Medicine in a bottle (..............)
d Water in a washing machine (..............)
e Water in an aquarium (..............)
f Shampoo in a bottle (..............)
g Milk in a baby's bottle (..............)
h Gasoline in a car (..............)
i Water in a swimming pool (..............)
j Water in a mug (..............)
k Paint in a bucket (..............)
l The amount of water used by a person for bathing (..............)
m The amount of juice in a family-size can (..............)

4 Choose the answer nearest to the correct from between brackets :

a The amount of water in a small cup of water ....
(3 millilitres or 150 millilitres or 700 millilitres)

b The amount of medicine in a small ampule ....
(15 millilitres or 150 millilitres or $\frac{1}{4}$ litre)

c The amount of water necessary for washing a car ....
($\frac{1}{2}$ litre or 15 litres or 150 litres)

d The amount of water necessary for washing two dishes ....
(1 500 millilitres or 50 millilitres or 20 litres)

e The amount of water for filling a bottle ....
(5 millilitres or 1 500 millilitres or 20 litres)

f The amount of milk used by a family of four persons is ....

(500 litres or 2 000 millilitres or 50 litres)

g What is the capacity of a glass of water ? ....

(3 litres or 25 litres or 250 millilitres)

h Eman bought a bottle of medicine of capacity ....

($\frac{1}{5}$ litre or 2 litres or 1 000 millilitres)

i We have a water tank of capacity ....

(200 millilitres or 50 litres or 50 millilitres)

j I used about .... of water in bathing today.

(50 litres or $\frac{1}{2}$ litre or 10 litres)

5 Complete as in (a) :

a 2 litres = 2 000 millilitres.

b 6 litres = ... millilitres.

c 4 000 millilitres = ... litres.

d 20 litres = ... millilitres.

e 7 000 mL = ... L

f $7\frac{1}{2}$ litres = ... millilitres.

g 1 400 mL = ... L

h 1 205 mL = ... L

i 20 mL = ... L

j $1\frac{1}{4}$ L = ... mL

k 24 L = ... mL

l $5\frac{1}{2}$ L = ... mL

m 10 000 mL = ... L

n .... L = 3 500 mL

o 8 500 mL = ... L

p .... L = 9 750 mL

q 2 dm^3 = ... mL

r 7 litres = ... cm^3

6 Choose the correct answer :

a The unit of measuring capacity is ………. (cm. or litre or m.)

b 1 litre = ………. (1 cm^3 or 1 dm^3 or 100 cm^3)

c 1 millilitre = ………. cm^3 (1 000 or 100 or 1)

d 900 millilitres = ………. litres (9 or 90 or 0.9)

e 82 000 millilitres = ………. litres. (82 000 or 820 or 82)

f 6 750 millilitres = ………. litres. (675 or $67\frac{1}{2}$ or $6\frac{3}{4}$)

g 10 millilitres = ………. dm^3 (0.01 or 0.1 or 0.001)

h 750 cm^3 = ………. L ($\frac{1}{2}$ or $\frac{1}{4}$ or $\frac{3}{4}$)

7 Put (✓) for the correct statement and (✗) for the incorrect one :

a 2 dm^3 = 2 mL ( )

b 7 500 mL = 7.5 L ( )

c 7 000 mL = 7 L ( )

d 1 mL = $\frac{1}{10}$ L ( )

e $1\frac{1}{4}$ L = 1 250 mL ( )

8 Complete :

a 3 litres , 300 cm^3 = ………. mL

b 3 000 mL , 20 dm^3 = ………. L

c $2\frac{1}{4}$ litres , 750 mL = ………. dm^3

d $8\frac{3}{4}$ litres , 7 dm^3 = ………. mL

e $5\frac{1}{2}$ dm^3 , 300 cm^3 = ………. mL

f 1 900 mL , 1 100 cm^3 = ………. L

Lesson 1

9 Put the suitable relation (< , > or =) :

a 2 litres ☐ 1 500 millilitres.

b $\frac{1}{4}$ litre ☐ 245 millilitres.

c 1 L ☐ 1 dm^3

d $1\frac{1}{4}$ L ☐ 1 500 mL

e 500 mL ☐ 1 dm^3

f 2 000 cm^3 ☐ 2 litres.

g 750 millilitres ☐ $\frac{3}{4}$ litre.

h 4 000 mL ☐ 40 L

i 500 millilitres ☐ $\frac{1}{3}$ litre.

j 7 dm^3 ☐ 700 cm^3

k 9 000 mL ☐ 10 L

l $\frac{3}{4}$ L ☐ 750 dm^3

10 Circle the greatest measurement in each of the following cases :

a $\frac{1}{4}$ litre - 301 millilitres - 1 litre

b 4 litres - 5 000 millilitres - 2 999 millilitres

c 8 304 millilitres - 7 994 millilitres - $6\frac{1}{2}$ litres

d 14 450 millilitres - 13 499 millilitres - $14\frac{1}{2}$ litres

11 Arrange the quantities in an ascending order in each of the following cases :

a 3 000 millilitres , 2 litres and $3\frac{1}{2}$ litres

The order is : ……… , ……… and ………

b 10 L , 30 mL , 2 000 mL , 30 L and 3 mL

The order is : ……… , ……… , ……… , ……… and ………

c $2\frac{1}{4}$ L , 2 099 mL , 3 L and $2\frac{3}{4}$ L

The order is : ……… , ……… , ……… and ………

12 **Arrange the quantities in a descending order in each of the following cases :**

a 250 mL , 1 L , 1 250 mL and $\frac{1}{2}$ L

The order is : .... , ... , ... and ....

b 8.75 litres , 9 000 millilitres , 5 litres and 6 500 millilitres

The order is : .... , ... , ... and ....

c 10 L , 9 900 millilitres , $12\frac{1}{2}$ L and 7 000 cm^3

The order is : .... , ... , ... and ....

13 **The capacity of each of the following measuring cups is 2 litres. How much liquid is in each jug ? complete.**

a

.... millilitres.

b

.... millilitres.

c

.... litre.

d

.... litre.

e

.... litre.

f

.... litre.

Lesson 1

14 The capacity of each of the following measuring cups is 2 litres. Colour the measuring cup to express the indicated amount :

a

1 700 millilitres

b

300 millilitres

c

900 millilitres

d

$1\frac{1}{2}$ litre

e

$\frac{3}{4}$ litres

f

$1\frac{1}{4}$ litres

15 If 5 drops of water make 1 mL , then how many drops make 1 L ?

....

16 A cup holds 250 mL , how many cups would it take to make 1 L ?

....

17 A bucket holds 6 litres of water. After rain, it was one third full.
How many litres of water were in the bucket ? How many mL ?

....

18 Karim filled a bowl with 5 glasses of water. If each glass had a capacity of 300 mL, how many millilitres of water did the bowl hold ?

....

19 **Use mental math. to answer the questions :**

a One large glass holds 300 mL, do 3 glasses hold more or less than 1 L ?

....

b A small juice can holds 150 mL, do 5 juice cans hold more or less than 1 L ?

....

20 **Uncle Wael has a lot of containers. Help him decide which container he should use to hold each type of juice. Write the letters in the boxes :**

	Container
1 Two and thirty-eight hundredths of a litre of apple juice.	
2 One and sixty-seven hundredths of a litre of guava juice.	
3 Seventy-nine hundredths of a litre of orange juice.	
4 Two and seven tenths of a litre of pineapple juice.	
5 Sixty hundredths of a litre of mango juice.	
6 Three and two hundredths of a litre of lemon juice.	

Lesson 2

Weight

What is weight ?

Weight is the measure of the heaviness of an object.

- In our daily life we deal with weight in several situations.

For example :

- When your father wants to buy something from the market, such as rice, meat or fruit, the seller weighs what the wants.

- The doctor usually weighs the baby every visit to follow the baby's growth.

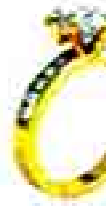
Converting units

- We use balances for measuring weight of a quantity.
  Here are different types of balances :

- In our daily life we usually use gram, kilogram and ton as units of measuring weight.

For example :

- The weight of a ring is 3 grams.



- The weight of a boy is 25 kilograms.

- The weight of a truck is 1.5 ton.

Notice that :

1 ton = 1 000 kilograms
1 kilogram = 1 000 grams
1 ton = 1 000 000 grams

- According to previous relations, we can convert each unit to any another unit as follows :

Ton $\underset{\div 1\,000}{\overset{\times 1\,000}{\rightleftarrows}}$ Kilogram (kg.) $\underset{\div 1\,000}{\overset{\times 1\,000}{\rightleftarrows}}$ Gram (gm.)

Notice that :

$\frac{1}{2}$ ton = 500 kg.	$\frac{1}{2}$ kg. = 500 gm.
$\frac{1}{4}$ ton = 250 kg.	$\frac{1}{4}$ kg. = 250 gm.
$\frac{3}{4}$ ton = 750 kg.	$\frac{3}{4}$ kg. = 750 gm.

Exercise 17

Weight

From the school book

1 Circle the answer that gives the best estimate of the weight as in the example :

Example

(2 kg. or (300 gm.) or 4 gm.)

a

(5 000 gm. or 20 kg. or 2 tons)

b

(1 kg. or 10 gm. or 150 kg.)

c

($\frac{3}{4}$ ton or 1 000 gm. or 100 kg.)

d

(5 kg. or 700 gm. or 1 kg.)

e

(15 kg. or 50 gm. or 1 ton)

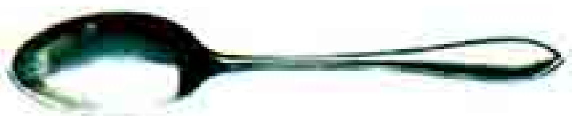
f

(1 kg. or 400 gm. or 1.5 kg.)

g

(800 gm. or 200 gm. or 20 gm.)

h



(100 gm. or 500 gm. or 800 gm.)

i

(5 kg. or 15 kg. or 25 kg.)

2 Choose the suitable unit of weight to measure the given object :

a A bicycle : .... (grams or kilograms or tons)

b A rabbit : .... (grams or kilograms or tons)

c A car : .... (grams or kilograms or tons)

d A toothbrush : .... (grams or kilograms or tons)

e An elephant : .... (grams or kilograms or tons)

f A rat : .... (grams or kilograms or tons)

g A spoon of sugar : .... (grams or kilograms or tons)

h A cow : .... (grams or kilograms or tons)

i An envelope : .... (grams or kilograms or tons)

j A pencil : .... (grams or kilograms or tons)

k A desk : .... (grams or kilograms or tons)

l A paper clip : .... (grams or kilograms or tons)

m A loaf : .... (grams or kilograms or tons)

n A cup : .... (grams or kilograms or tons)

o A bear : .... (grams or kilograms or tons)

3 Choose the suitable weight for :

a A jar of jam : .... (50 kilograms or 5 grams or 500 grams)

b An apple : .... (10 grams or 150 grams or 1 kilogram)

Lesson 2

c A toy car : .... (2 grams or 10 grams or 700 grams)

d A dining room chair : .... (6 grams or 6 kilograms or 6 tons)

e A cat : .... (5 kilograms or 500 grams or 50 kilograms)

f A truck : .... (2 tons or 20 kg. or 3 500 gm.)

g Your father : .... (1 ton or 95 kg. or 80 gm.)

h A golden bracelet : .... (2 tons or 10 grams or 2 kg.)

i Watermelon : .... (3 gm. or 3 kg. or 3 tons)

j Spoon : .... (50 gm. or 50 kg. or 1 gm.)

k Cheese burger sandwich : .... (180 gm. or 180 kg. or 18 gm.)

l Bag of flour : .... (3 gm. or 3 kg. or 3 tons)

m Bicycle : .... (15 gm. or 15 kg. or 500 kg.)

4 Complete as in number (a) :

a 3 tons = 3 000 kilograms.

b 7 240 kilograms = ... tons.

c 75 kilograms = ... grams.

d 12 000 grams = ... kilograms.

e 7 tons = ... grams.

f 500 000 grams = ... ton.

g 70 kg. = ... gm.

h 4 500 gm. = ... kg.

i 1 kg. = ... ton.

j 1 gm. = ... kg.

k 60 gm. = ... kg.

l 5 000 gm. = ... ton.

m 1 000 gm. = ... ton.

n 10 tons = ... kg.

o ………… kg. = 1 900 gm.

p ………… tons = 4 750 kg.

q $\frac{1}{2}$ kg. = ………… gm.

r $4\frac{1}{2}$ tons = ………… kg.

5 Complete as in number (a) :

a 6 230 gm. = 6 kg. and 230 gm.

b 3 715 gm. = ………… kg. and ………… gm.

c 73 102 gm. = ………… kg. and ………… gm.

d 9 251 kg. = ………… tons and ………… kg.

e 53 kg. and 8 gm. = ………… gm.

f 6 kg. and 32 gm. = ………… gm.

6 Complete:

a $6\frac{1}{4}$ kg. + 200 gm. = ………… gm.

b $7\frac{1}{2}$ kg. + 250 gm. = ………… gm.

c $6\frac{3}{4}$ kg. + 250 gm. = ………… kg.

d $1\frac{3}{4}$ kg. + 50 gm. = ………… gm.

e $9\frac{1}{4}$ kg. + 750 gm. = ………… gm. = ………… kg.

7 Choose the correct answer between brackets:

a 4 kg. and 700 gm. = ………… gm. (4 070 or 4 700 or 4 007)

b $6\frac{1}{2}$ kg. = ………… gm. (650 or 6 005 or 6 500)

c $2\frac{3}{4}$ kg. = ………… gm. (2 250 or 2 500 or 2 750)

d 6 020 gm. = 6 kg. + ………… gm. (2 or 200 or 20)

e 1 kg. and 750 gm. = ………… kg. (2 or $1\frac{1}{4}$ or $1\frac{3}{4}$)

Lesson 2

8 Put the suitable relation (< , > or =) :

a kg. ☐ ton.

b kilogram ☐ gram.

c 500 kg. ☐ 1 ton.

d 10 tons ☐ 10 000 kg.

e $3\frac{1}{4}$ kg. ☐ 3 250 gm.

f 9 750 kg. ☐ 9 tons.

g 750 gm. ☐ $\frac{1}{2}$ kg.

h $6\frac{1}{2}$ tons ☐ 6 500 kg.

i 8 780 kg. ☐ 9 tons.

j 3 kg. ☐ 3 000 gm.

k 700 gm. ☐ 0.7 kg.

l 1 ton ☐ 1 million grams.

9 Circle the greatest weight and underline the smallest one in each of the following as in number (a) :

a 30 000 gm. - 2 tons - 2 100 kg.

b $2\frac{1}{2}$ kg. - 2 tons - 2 000 gm.

c $\frac{1}{2}$ ton - 3 kg. - 300 001 gm.

d 600 tons - 800 000 gm. - 7 000 kg.

e 2 490 gm. - 249 kg. - $\frac{1}{4}$ ton

f $\frac{3}{4}$ ton - 99 010 gm. - 99 kg.

10 Arrange the following weights in an ascending order in each case :

a Kilogram, gram and ton

The order is : .... , ... and ....

b 3 kg. , 850 gm. , 2 kg. and $\frac{1}{2}$ kg.

The order is : .... , ... , ... and ....

c 5 000 gm. , 7 kg. , $\frac{1}{2}$ ton and 120 kg.

The order is : .... , ... , ... and ....

d 700 gm. , $\frac{1}{2}$ kg. , $1\frac{1}{2}$ kg. and 200 gm.

The order is : .... , ... , ... and ....

e 12 500 gm. , 17 kg. , $1\frac{1}{2}$ ton and 700 gm.

The order is : .... , ... , ... and ....

11 Look at the scales, then write the weight in each of the following cases :

a

.... kg.

b

.... kg.

c

.... kg.

12 Look at the reading on the weighing scales in each of the following cases and complete :

a

.... kg.

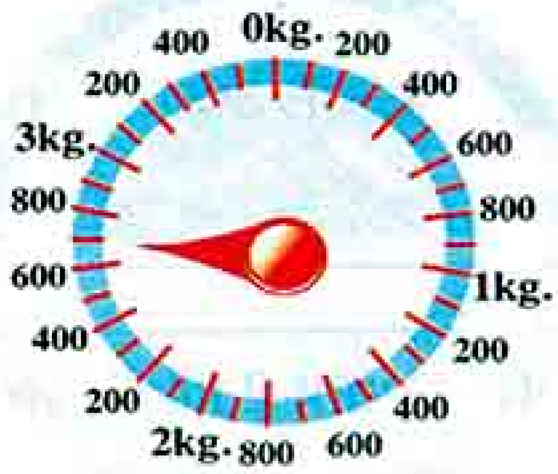
b

.... kg.

c

.... gm.

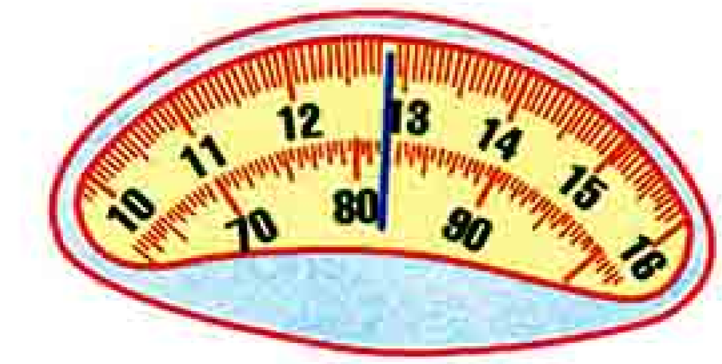
d



.... gm.

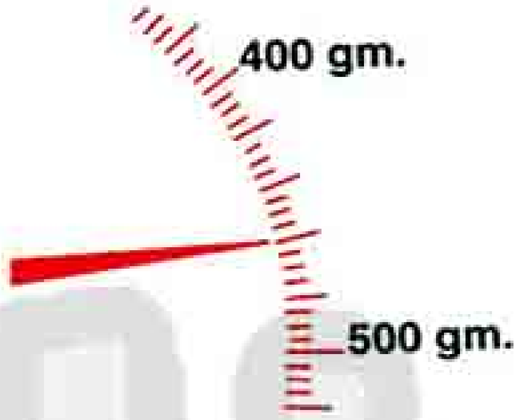
Lesson 2

13 Dina is six years old. She weighs herself. Look at the reading on the scales. How much does she weigh ? "choose"



- **a** 12 kg.
- **b** 12.8 kg.
- **c** 83 kg.
- **d** 80 kg.

14 A parcel is weighed at the post office and gives the reading shown in the picture. How much does it weigh ? "choose"



- **a** 403 gm.
- **b** 460 gm.
- **c** 412 gm.
- **d** 480 gm.

15 Wiaam has weighed a tin of potatoes on some digital scales. What is the reading ? "choose"

- **a** 1.172 kg.
- **b** 1.172 gm.
- **c** 172 gm.
- **d** 172 kg.

Real Life Problems

a Nabila bought 3 kilograms of oranges for P.T. 200 each and 2 kilograms of grapes for P.T. 300 each. How much money did she pay ?

....

b Farah bought 2 kilograms and a half of green beans and two kilograms and a quarter of potatoes. How many grams did Farah carry ?

....

c The price of 1 kg. of meat is L.E. 35 A family eats one and a half kilograms of meat every week. How much money does this family pay for meat in a month ?

....

d A family of 5 persons eats 2 kg. of fish every week. The price of fish is L.E. 15 for a kilogram. How much money does this family pay for fish in a month ?

....

e If one lunch box weighs 425 grams, will 3 lunch boxes be more or less than one kilogram ? what is the total weight of the 3 lunch boxes ?

....

f A man bought 8 tons of iron for building his family house. If the price of 1 kilogram of iron is four and half pounds. Find :

1. the price of one ton of iron.
2. the money paid for the iron he bought.

g A family of 7 persons eat monthly 5 kilograms of bananas , 2 kilograms of apples and 6 kilograms of oranges.
The price for one kg. as shown are L.E. 3 for oranges, L.E. 8 for apples , L.E. 4 for bananas and L.E. 2 for guavas.

Answer the following :

1. How much money does this family pay for fruits ?
2. If the family wants to pay less money , but get the same amount of fruits , what will they do ?

Time

- We use the time to measure the period between two events, or the period in which something happens.

- The units of measuring time are hour, minute, second, day, ...

Notice that :

1 day = 24 hours. 1 hour = 60 minutes.

1 minute = 60 seconds.

• According to previous relations, we can convert each unit to any of the other units as follows :

Week $\xrightarrow[\div 7]{\times 7}$ Day $\xrightarrow[\div 24]{\times 24}$ Hour $\xrightarrow[\div 60]{\times 60}$ Minute $\xrightarrow[\div 60]{\times 60}$ Second

For example :

a 4 weeks = 4 × 7 = 28 days.

b 5 days = 5 × 24 = 120 hours.

c 7 minutes = 7 × 60 = 420 seconds.

d 216 hours = 216 ÷ 24 = 9 days.

Notice that :

$\frac{1}{2}$ day = 12 hours.	$\frac{1}{2}$ hour = 30 minutes.
$\frac{1}{3}$ day = 8 hours.	$\frac{1}{3}$ hour = 20 minutes.
$\frac{1}{4}$ day = 6 hours.	$\frac{1}{4}$ hour = 15 minutes.
$\frac{3}{4}$ day = 18 hours.	$\frac{3}{4}$ hour = 45 minutes.

For example :

a $2\frac{1}{2}$ hours = 60 + 60 + 30 = 150 minutes.

b 270 seconds = 270 ÷ 60 = $4\frac{1}{2}$ minutes.

Exercise 18

Time

From the school book

1 Choose the suitable unit of time to measure the given event :

a A football match : .... (seconds or hours or days)

b Building a house : .... (seconds or hours or days)

c Brushing your teeth : .... (seconds or days or minutes)

d Travelling from Cairo to Alexandria by train : ....

(seconds or minutes or hours)

2 Complete :

a Some units of measuring time are .... , ... , ... and ....

b (1) 1 day = ... hours and 1 hour = ... day.

(2) 1 hour = ... minutes and 1 minute = ... hour.

(3) 1 minute = ... seconds and 1 second = ... minute.

c (1) 1 day = ... hours = ... × .... minutes = ... minutes.

(2) 1 hour = ... minutes = ... × .... seconds = ... seconds.

(3) 1 day = ... minutes = ... × .... = ... seconds.

3 Complete :

a 1 hour = ... minutes.

b 2 hours = ... minutes.

c 3 hours = ... minutes.

d 120 minutes = ... hours.

e $\frac{1}{4}$ hour = ... minutes.

f 1 minute = ... hour.

g $\frac{1}{3}$ hour = ... minutes.

h $\frac{1}{2}$ hour = ... minutes.

i 1 hr. and 40 min. = ... min.

j 2 hr. and 30 min. = ... min.

k $2\frac{1}{3}$ hours = ... minutes.

l 270 minutes = ... hours.

m 135 minutes = ... hours.

n 240 minutes = ... hours.

o 2 hr. and 5 min. = ... min.

p 330 minutes = ... hours.

q $3\frac{1}{2}$ hours = ... minutes.

r $4\frac{3}{4}$ hours = ... minutes.

4 Complete :

a 1 minute = ... seconds.

b 2 minutes = ... seconds.

c $1\frac{1}{2}$ minutes = ... seconds.

d 180 seconds = ... minutes.

e 240 seconds = ... minutes.

f 300 seconds = ... minutes.

g 1 hour = ... seconds.

h $2\frac{1}{4}$ minutes = ... seconds.

5 Complete :

a 1 day = ... hours.

b 2 days = ... hours.

c $\frac{1}{2}$ day = ... hours.

d $\frac{1}{4}$ day = ... hours.

e $\frac{1}{3}$ day = ... hours.

f $\frac{2}{3}$ day = ... hours.

g $1\frac{1}{2}$ day = ... hours.

h $2\frac{1}{2}$ days = ... hours.

i $2\frac{1}{4}$ days = ... hours.

j 48 hours = ... days.

k 36 hours = ... days.

l 72 hours = ... days.

m 16 hours = ... day.

n 30 hours = ... days.

o 1 day = ... minutes.

p $\frac{1}{4}$ day = ... minutes.

q 2 days and 16 hours = ... hours.

Lesson 3

r 3 days and 8 hours = ... hours.

s 1 week = ... hours.

t $3\frac{1}{2}$ days = ... hours.

6 **Complete :**

a 60 minutes and 167 hours = ... days.

b 720 minutes and 96 hours = ... days.

c 5 days and 6 hours = ... minutes.

d 3 days and 180 minutes = ... hours.

e 4 days and 1 800 seconds = ... hours.

f $1\frac{2}{3}$ hours and 20 minutes = ... seconds.

7 **Put the suitable relation (< , > or =) :**

a 1 day ☐ 24 hours.

b 2 days ☐ 50 hours.

c $\frac{1}{2}$ day ☐ 10 hours.

d $\frac{1}{3}$ day ☐ 12 hours.

e $\frac{3}{4}$ hour ☐ 50 minutes.

f 72 hours ☐ three days.

g $2\frac{1}{3}$ hours ☐ 150 minutes.

h $\frac{2}{3}$ hour ☐ 2 600 seconds.

i $\frac{1}{2}$ hour ☐ 1 800 seconds.

j $1\frac{1}{2}$ day ☐ 40 hours.

k 57 hours ☐ 2 days and 9 hours.

l 60 hours ☐ 2 days and an hour.

m 29 hours ☐ 1 day and 5 hours.

n 48 hours ☐ 1 day and 23 hours.

o 1 hour ☐ 59 minutes and 60 seconds.

p $\frac{1}{4}$ day ☐ 21 600 seconds.

q 120 seconds ☐ 3 minutes.

r 2 hours ☐ 9 000 seconds.

s $\frac{1}{10}$ hour ☐ 360 seconds.

8 **Circle the greatest time and underline the smallest one in each case :**

a 14 000 seconds , 250 minutes and 7 hours

b 30 000 minutes , 498 hours and 20 days

c 8 600 seconds , 140 minutes and $2\frac{1}{2}$ hours

d 4 700 minutes , 80 hours and $3\frac{1}{4}$ days

e 19 100 seconds , 330 minutes and $5\frac{1}{3}$ hours

f 14 000 minutes , 210 hours and 10 days

9 **Arrange the following in an ascending order :**

a 2 days , 42 hours and 2 160 minutes

The order is : .... , ... and ....

b 3 600 seconds , 2 hours , 240 minutes and $\frac{1}{4}$ a day

The order is : .... , ... , ... and ....

c 1 440 minutes , 3 600 seconds , $\frac{1}{3}$ a day and $\frac{1}{8}$ a day

The order is : .... , ... , ... and ....

d 300 minutes , 19 000 seconds and 4 hours

The order is : .... , ... and ....

Lesson 3

e $\frac{1}{3}$ a day , 20 hours , 4 800 minutes and 6 000 seconds

The order is : .... , ... , ... and ....

10 Arrange the following in a descending order :

a 15 hours , $\frac{2}{3}$ a day , 240 minutes and 3 600 seconds

The order is : .... , ... , ... and ....

b 1 week , 72 hours , 10 days and 3 600 minutes

The order is : .... , ... , ... and ....

c $\frac{2}{3}$ day , 18 hours and 1 020 minutes

The order is : .... , ... and ....

11 Choose the suitable answer between brackets :

a Drinking a cup of water : .... (30 seconds or 5 minutes or $\frac{1}{2}$ hour)

b Reading a short story : .... (30 seconds or 30 minutes or 30 hours)

c Watching a movie : .... (50 seconds or 20 minutes or $1\frac{1}{2}$ hour)

d Eating lunch : .... (20 seconds or 30 minutes or 5 hours)

e The period that the pupil stays at a school day : ....

(57 seconds or 47 minutes or 7 hours)

f Doing your homework : .... ($\frac{1}{2}$ a day or 3 hours or 3 seconds)

g A person sleeps daily for about : ....

(500 seconds or 500 minutes or 100 minutes)

h An employee works daily for : ....

(48 minutes or $\frac{1}{2}$ a day or 360 seconds)

12 Underline the correct answer :

a How many hours and minutes are in 125 minutes ?

(2 hours and 25 minutes or 1 hour and 20 minutes or 2 hours and 5 minutes)

b How many hours are in a week ? (46 or 168 or 120)

c How many hours and minutes are in 190 minutes ?

(3 hours and 20 minutes or 3 hours and 10 minutes or 2 hours and 10 minutes)

d The total number of days and hours in (4 days , 16 hours + 7 days , 11 hours) is : ....

(11 days and 3 hours or 12 days and 7 hours or 12 days and 3 hours)

e There are 52 weeks in one year. How many weeks are there in 2 and half years ? (130 or 104 or 156)

13 Answer each of the following questions :

a Karima walked one kilometre in 9 minutes. How long would it take her to walk 7 kilometres at the same speed ?

....

b It takes 17 minutes to clean a car. How long would it take to clean 23 cars ?

....

c The school holiday starts after three weeks. School is opened 6 days a week. How many school days are left until the holiday ?

....

d The football match started at 2 : 30 pm. Each half was 45 minutes. What time did the first half end ?

....

Lesson 3

e Mona used to ride her bike in the weekends. Once she rode it at and finished at 3:40 For how long did she ride her bike on that day ?

....

f Samy spent 45 minutes doing his homework last night. He started it at 8 : 30 pm. What time did he finish his homework ?

....

g If Mazen's birthday was on 17 - 5 - 1999, what would his age be on 1 - 10 - 2009 ?

....

h An engineer works for 8 hours daily in an investment company. His salary is L.E. 10 in an hour , find his salary:

(1) In a week.

(2) In 7 weeks (he works 5 days a week)

....

Activities from the school book

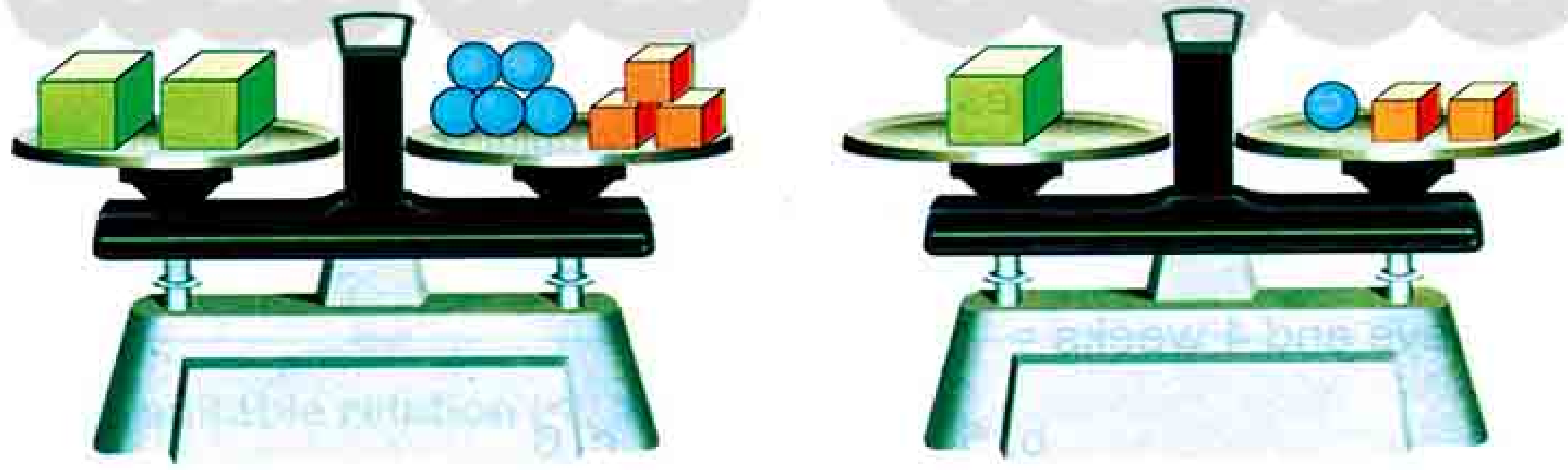
Activity 1

We have three pots of capacities 10 litres, 7 litres and 3 litres.

The largest pot is completely full of water and the other two pots are empty. Using the least number of steps, show how you use the three pots for dividing the water into two equal halves, putting five litres in the middle pot and five litres in the large pot.

Activity 2

If the two pans of the shown balance have the same weight in each of the two cases, answer the following questions :



a What is the relation between the weight of the small cube and the weight of the ball ?

b What is the relation between the weight of the large cube and the weight of the ball ?

GENERAL EXERCISE

From the school book

Unit Three " Measurement "

1 Choose the correct answer from those given :

1 $\frac{2}{3}$ a day = ………… hour.

a. 16 b. 15 c. 6 d. 18

2 The third of a day = ………… hours.

a. 12 b. 3 c. 8 d. 15

3 4.5 tons = ………… kg.

a. 45 b. 54 c. 4 500 d. 5 400

4 One day = ………… minutes.

a. 3 600 b. 60 c. 24 d. 1 440

5 14 days and 4 weeks = ………… weeks.

a. 4 b. 5 c. 6

6 25 decimetre cube = …………

a. $\frac{15}{5}$ litre b. 25 litre c. $\frac{1}{4}$ litre d. 25 millilitre

7 The litre is the capacity of a vessel in the shape of a cube with edge length = ...

a. 1 cm. b. 10 cm. c. 100 cm. d. 1 000 cm.

8 $\frac{3}{4}$ of the day = ... minutes.

a. 1 080 b. 180 c. 100 d. 1 800

9 $\frac{1}{2}$ litre = ... cm^3

a. 500 b. 5 000 c. 50 d. 50 000

2 **Complete each of the following :**

1 $3\frac{1}{4}$ kg. = ... gm.

2 4 750 millilitres = ... litre.

3 5 tons = ... kg.

4 8 500 millilitres = ... litre.

5 540 piasters = ... pounds.

6 The third of the day = ... hours

7 The litre = ... millilitres.

8 The minute = ... seconds.

3 **Put the suitable relation (< , > or =) :**

1 $\frac{3}{4}$ hour ☐ 75 minutes.

2 5 tons ☐ 5 000 gm.

3 $4\frac{3}{4}$ pounds ☐ 475 piasters.

General Exercise

4 0.5 kg. ☐ 750 gm.

5 $\frac{1}{3}$ of the day ☐ 7 hours.

6 9 800 millilitres ☐ 9.8 litres.

7 84 hours ☐ 5 days.

8 5 400 piasters ☐ 54 pounds.

9 The litre ☐ 100 millilitres.

10 100 gm. ☐ 1 kg.

11 8 780 kg. ☐ 9 ton

12 1.25 litre ☐ 1 200 mL.

13 4 pounds ☐ 475 piasters.

4 Arrange ascendingly :

1 37 hours , 1.5 day , 2 225 minutes

2 4 litres , 4 700 millilitre , 4.5 dm^3.

3 8 750 kg. , 9 ton. , 870 000 gm.

5 A man bought 8 tons of iron for building a house. If the price of one kg. of iron is 4 pounds. Find :

a The price of one ton of iron.

b The price of the quantity of iron which the man bought.

Test on Unit Three

1 Choose the correct answer from the given ones :

1. 5 litres = ... millilitres. (50 or 500 or 5 000 or 50 0000)
2. 48 hours .... 3 days. ($>$ or $=$ or $<$)
3. 3.5 tons = ... kg. (35 or 34 or 350 or 3 500)
4. 250 cm^3 .... $\frac{1}{4}$ litre. ($>$ or $=$ or $<$)
5. The weight of the school book = ...
   (3 tons. or 300 gm. or 3 kg. or 30 kg.)
6. One day and half = ... hours. (24 or 36 or 48 or 30)
7. .... is a unit of measuring weight.
   (Litre or Kilogram or Hour or Minute)
8. 120 minutes = ... hours. (1.5 or 2.5 or 2 or 3)

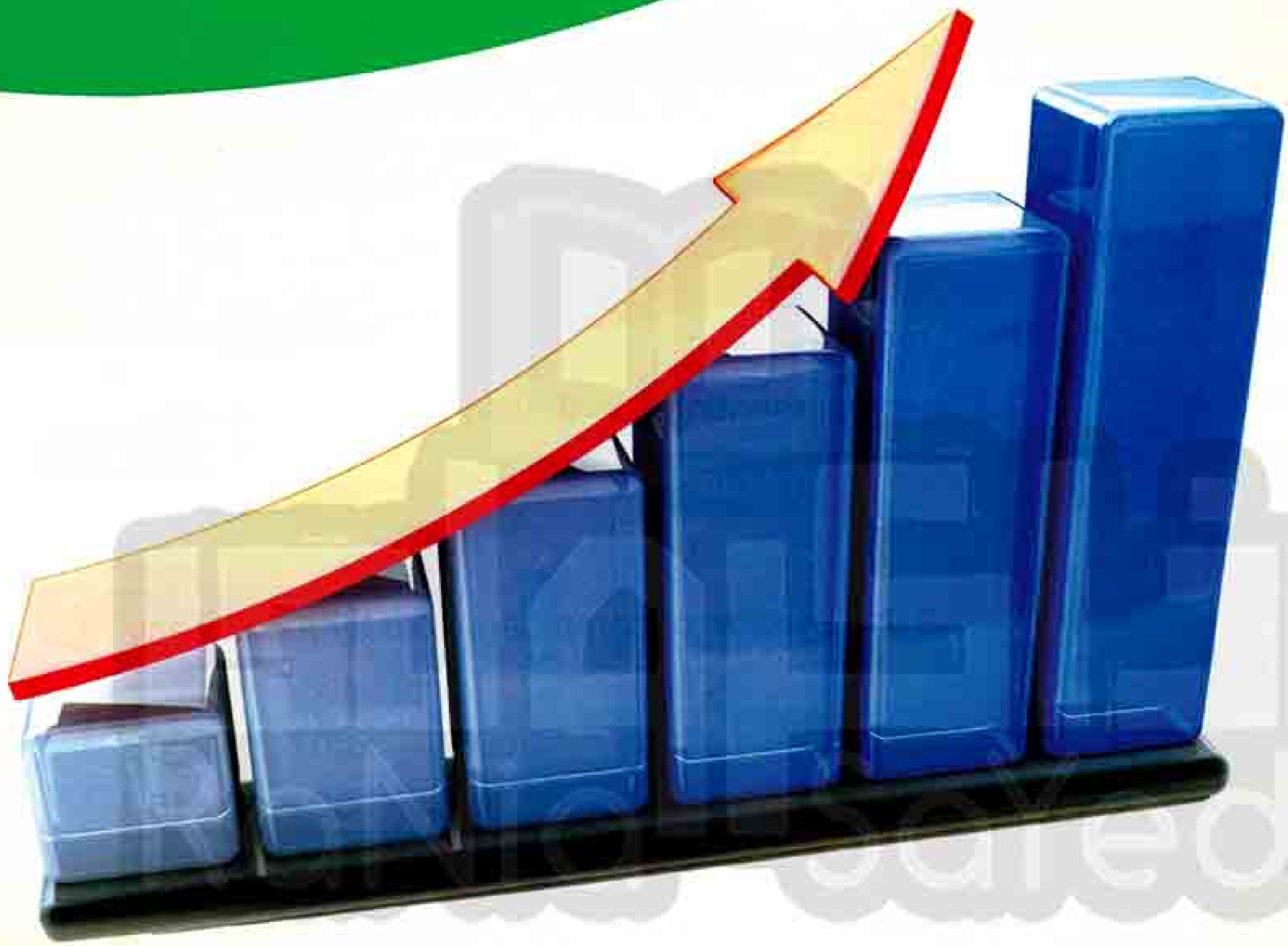
2 Complete each of the following :

9. 4.5 kg. = ... gm.
10. Litre is a unit of measuring ....
11. 7.2 litres = ... dm^3
12. $2\frac{1}{3}$ hours = ... minutes.
13. 6 250 kg. = ... tons.
14. 1 week = ... hours.

3 Answer the following :

15. Arrange the following quantities in a descending order :
    2 000 mL , 20 L , $2\frac{3}{4}$ dm^3 and 3 000 cm^3
    The order is : .... , ... , ... and ....
16. A TV series started at 7 : 30 P.M. and took 45 minutes , when did it finish ?
    It finished at ....

UNIT 4 Statistics and probability



Lessons of the unit :

1. Collecting,displaying and representing data.
2. Probability.

⊙ Activities.

⊙ General exercise.

Lesson 1

Collecting, displaying and representing Data

- Data are collected using methods like :

1. noticing. **2.** experimenting. **3.** field (practical) studies.

Representing data using a histogram

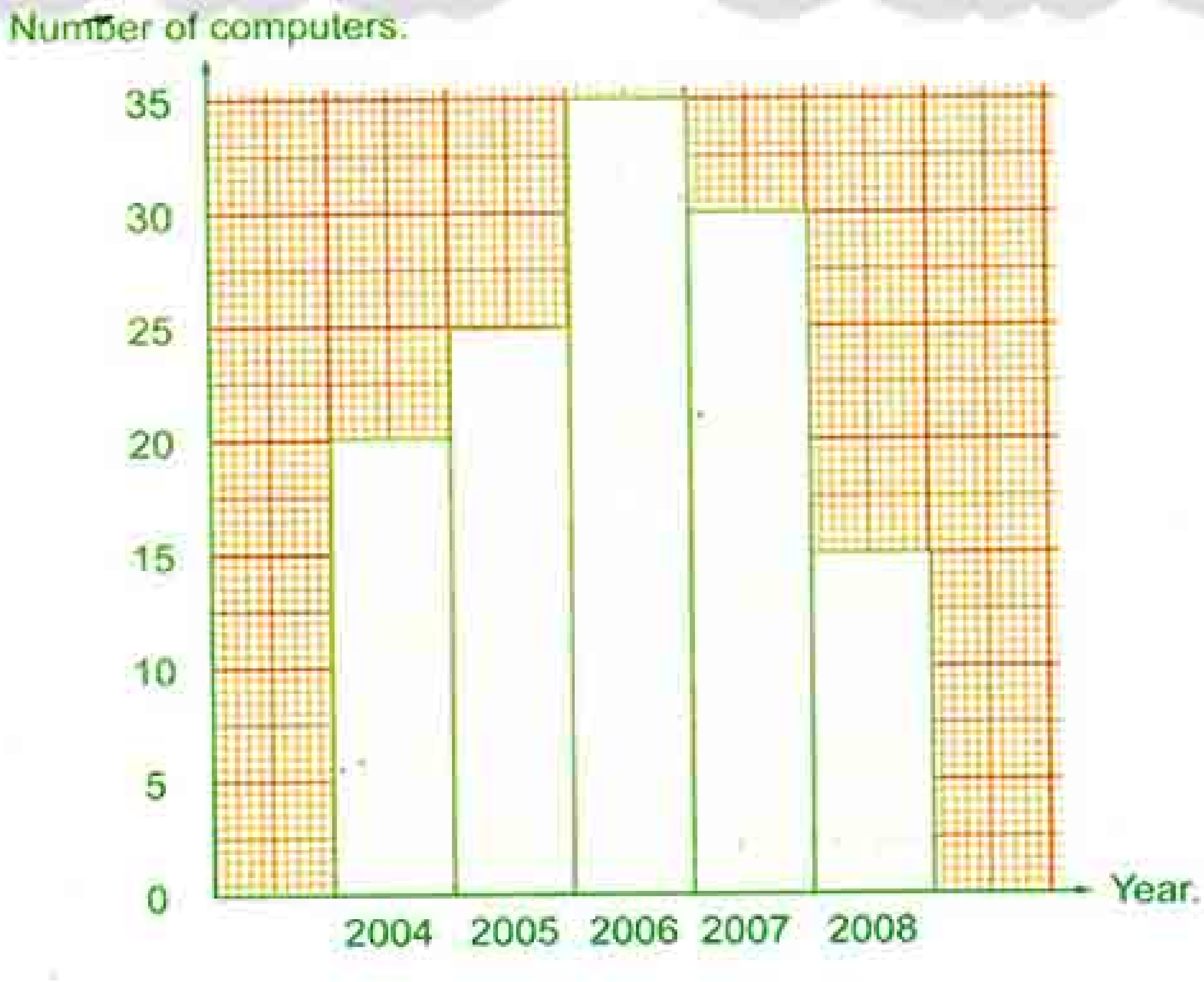
Example 1

The following table shows the number of computers sold by a company from 2004 to 2008 :

Year	2004	2005	2006	2007	2008
Number of computers	20	25	35	30	15

Represent these data by a histogram.

Solution



Representing data using bar lines

Example 2

The following table shows the number of students using the different types of transport to go to school in four classrooms :

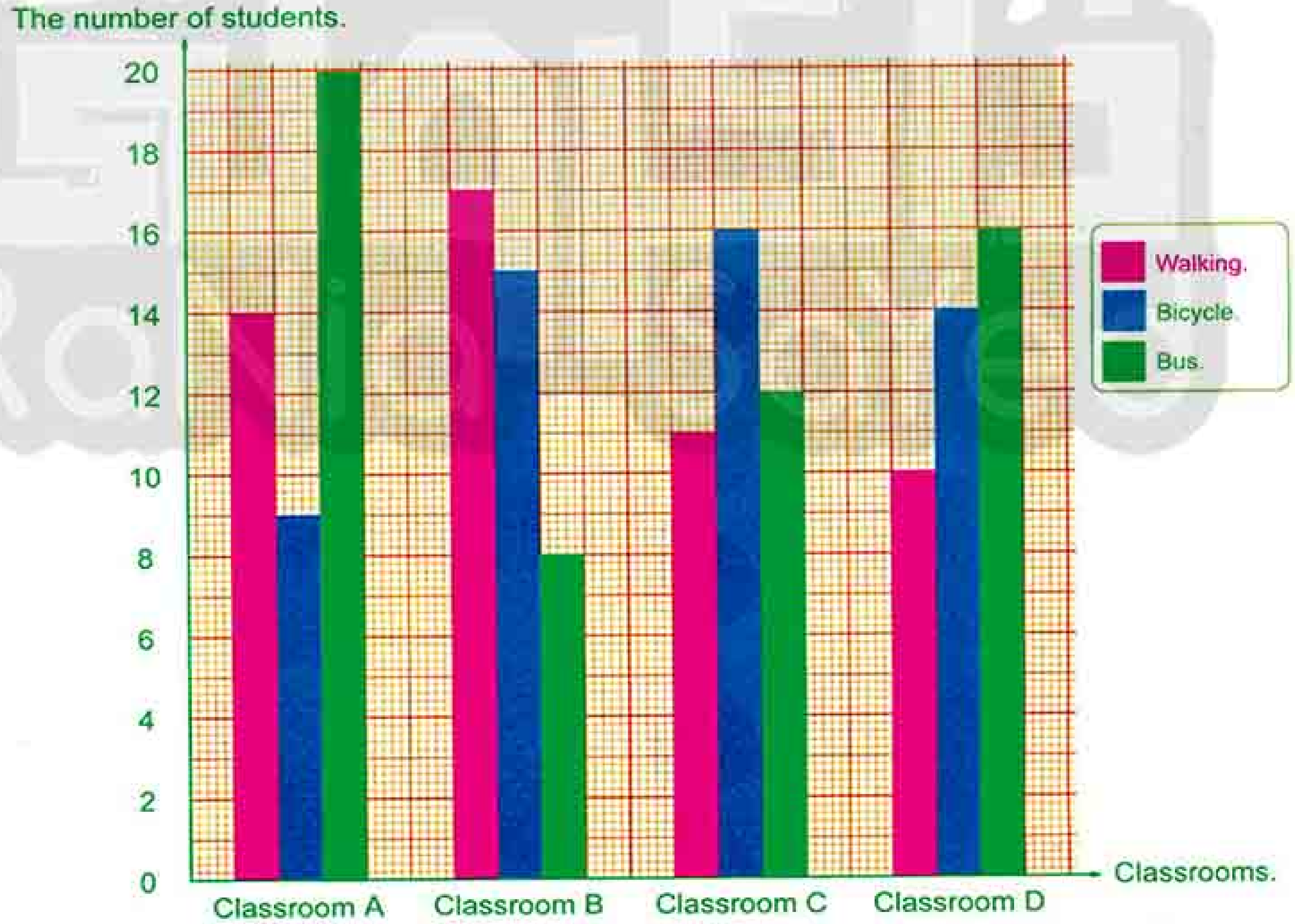
	Classroom A	Classroom B	Classroom C	Classroom D
Walking	14	17	11	10
Bicycle	9	15	16	14
Bus	20	8	12	16

a Represent these data using the triple bars.

b How many students go to school by bicycle ?

Solution

a



b From the frequency table or from the graph.

The number of students who go to school by bicycle = 9 + 15 + 16 + 14
= 54 students.

Lesson 7

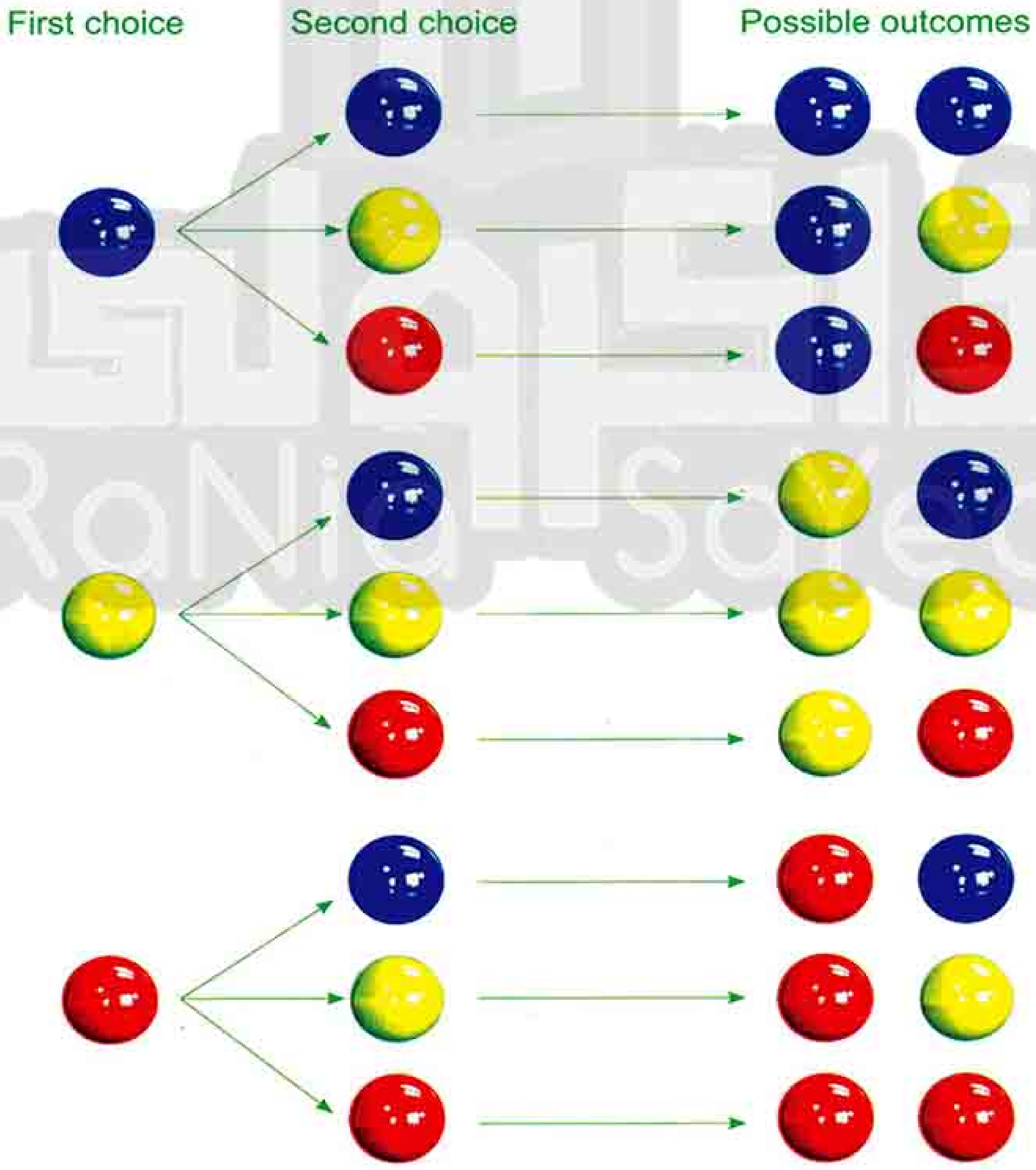
Representing data using the tree-diagram

Tree diagram is a way of organizing outcomes in order to identify all the possibilities.

Example 3

A box contains two blue balls, two yellow balls and two red balls.
If you choose two balls without looking, find all the possible combinations of outcomes ?

Solution



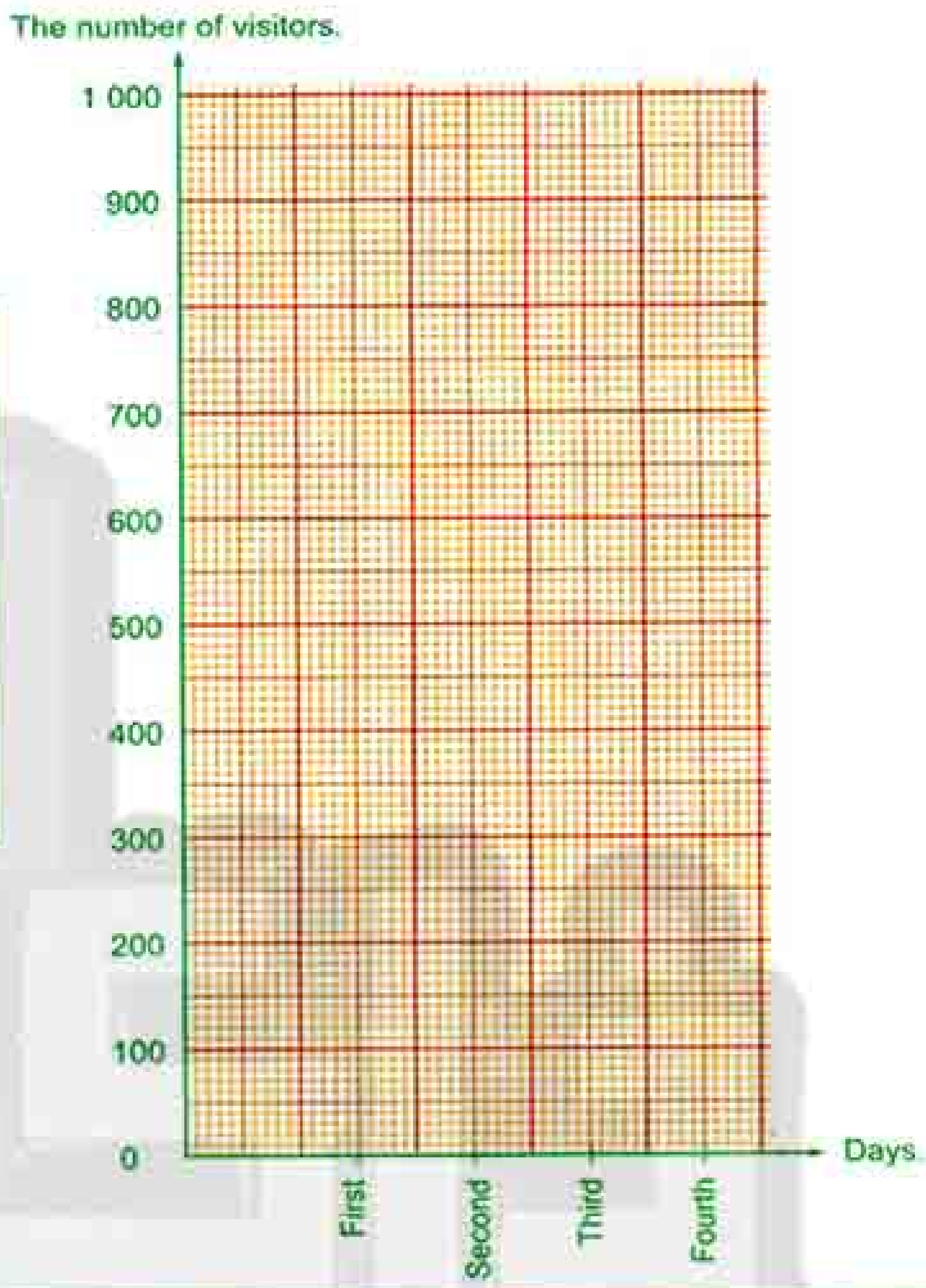
Exercise 19 Collecting, displaying and representing data

From the school book

1 The following table shows the number of visitors to a park for the four days of the feast :

Days	First	Second	Third	Fourth
Number of visitors	950	800	550	700

Represent these data using a histogram.



2 Use the following histogram to complete the table, then complete the questions below :

City	Cairo	Alex.	Tanta	El-Menia	Aswan
Temperature	....	....	....	....	....

a The highest temperature was in ....

b The lowest temperature was in ....

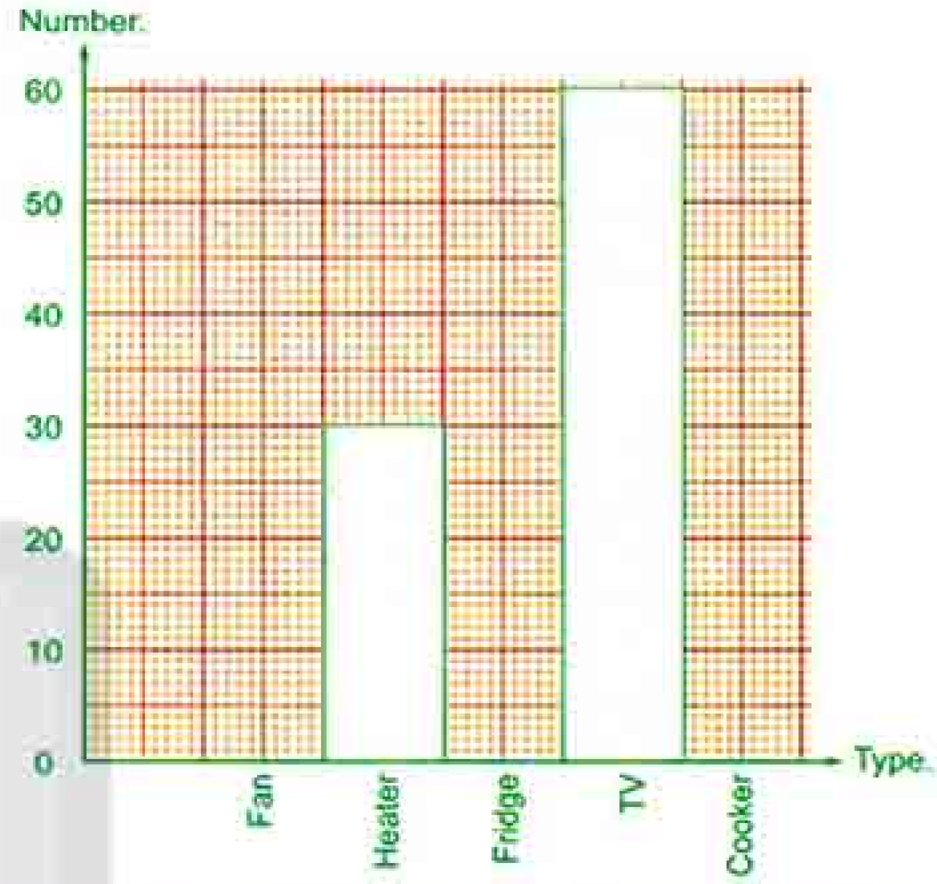
c The difference between the highest and the lowest temperatures was ....

Lesson 7

3 **The following table and histogram represent the weekly production of a factory :**

Complete the table and the graph.

Type	Fan	Heater	Fridge	TV	Cooker
Number	40	....	20	....	48



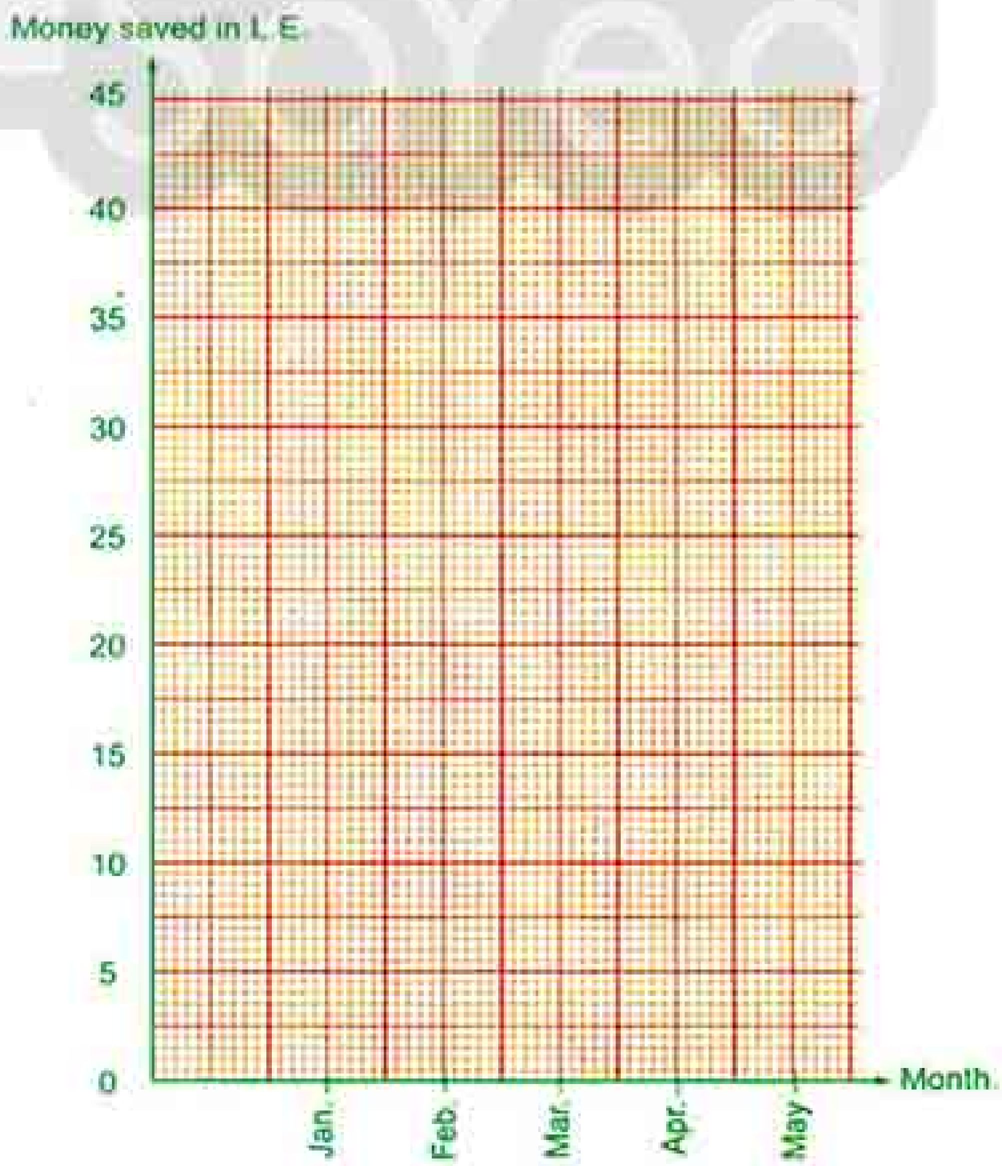
4 **The following table shows the sum of money which Joseph saved in 5 consecutive months :**

Month	January	February	March	April	May
Money saved in L.E.	30	20	40	20	45

a Represent the data in the table by using a histogram.

b Complete :

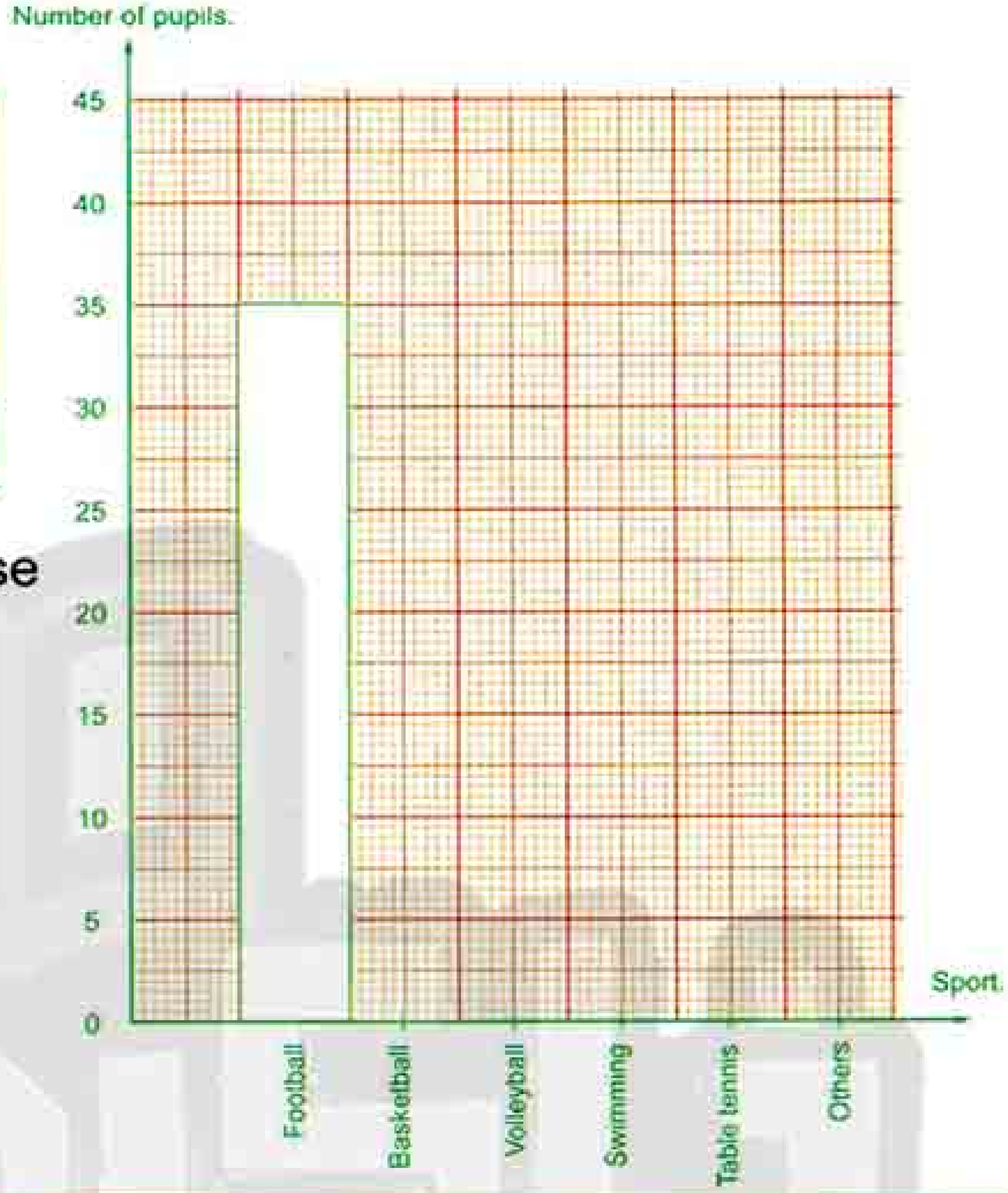
1. The equal amounts of money Joseph saved were in the months .... and ....
2. The sum of money he saved in the five months equals ....



5 **The following table and graph show the number of pupils participating in some sports :**

Sport	Football	Basketball	Volleyball	Swimming	Table tennis	Others
Number	35	28	15	25	10	10

Complete the representing of these data on the histogram.



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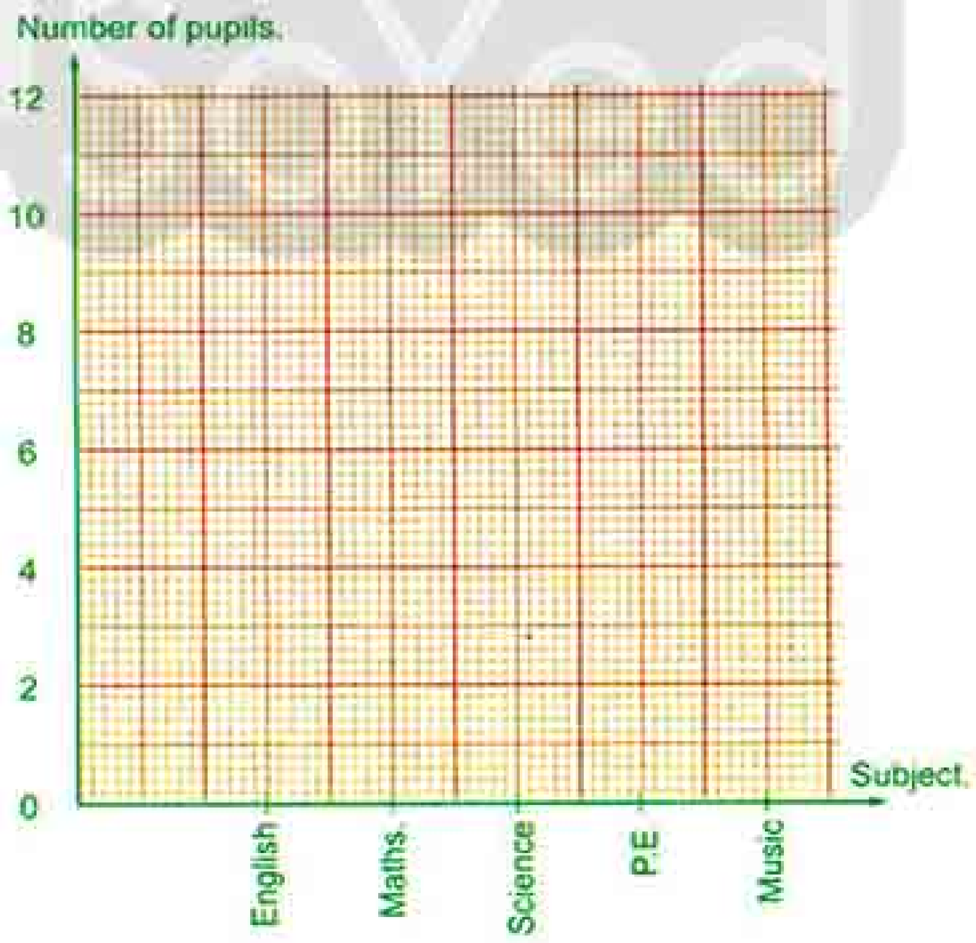
6 **The following tally table shows the number favourite school subjects of pupils in a classroom :**

Subject	English	Maths	Science	Physical education	Music
Pupils tallies	卌 //	卌 ////	卌 ///	卌 卌 /	卌
Number of pupils	7	....	....	....	....

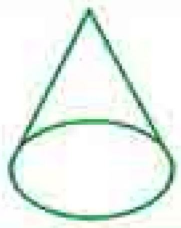
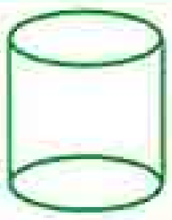
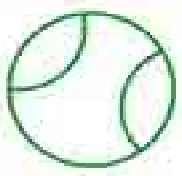
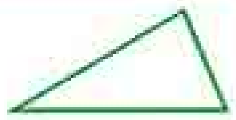
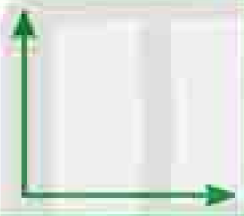


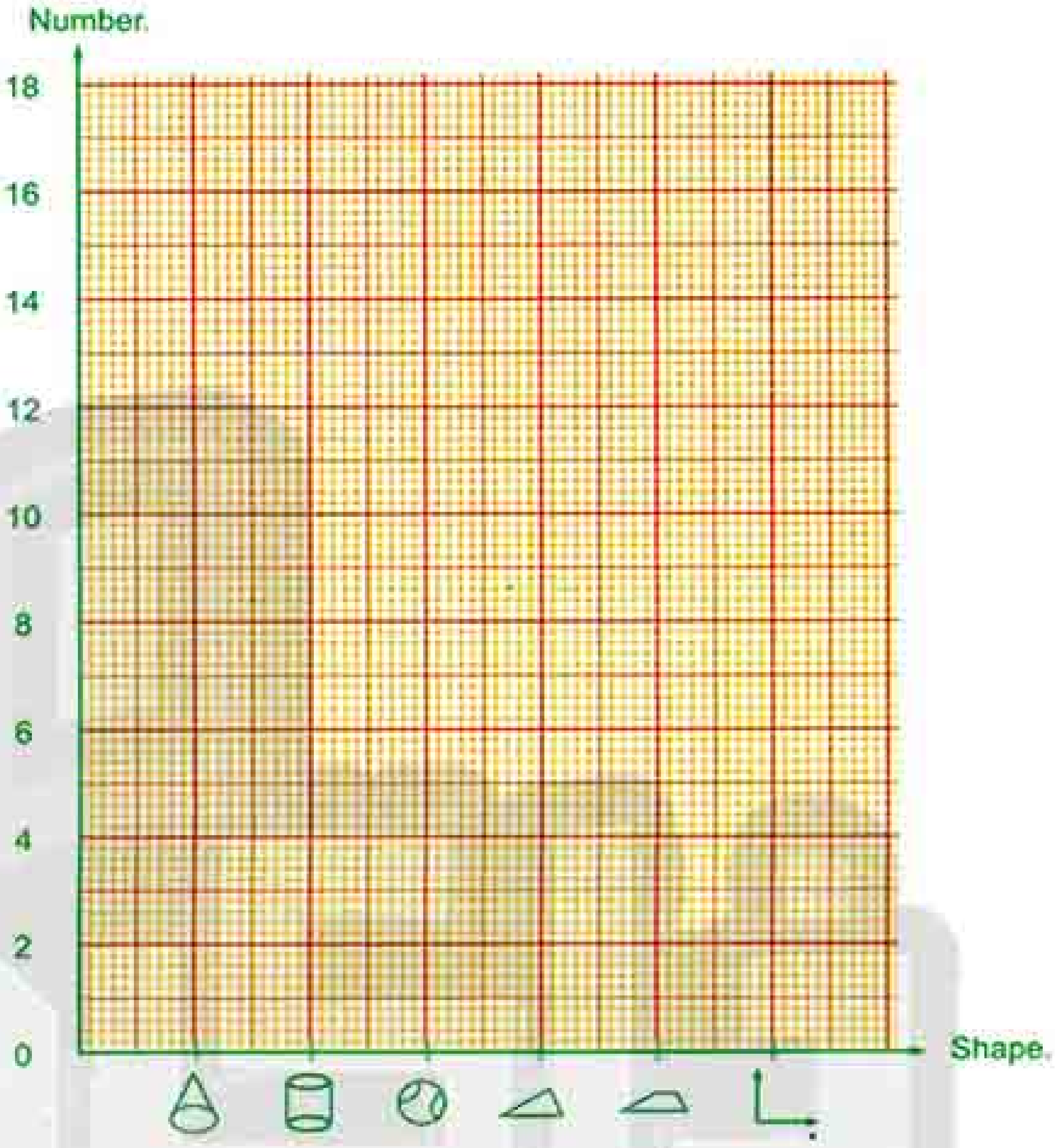
a Complete the table.

b Represent these data using a histogram.

Lesson 7

7 Mostafa classified the shapes drawn in his mathematics book and he found that :

Shape	Frequency	Number
	𝍸 𝍸 ///	....
	𝍸 𝍸 𝍸	....
	𝍸 ///	....
	𝍸 ////	....
	𝍸 /	....
	𝍸 //	....



Record the numbers of these shapes in the table, then represent them on a histogram.

8 **The table below shows the production of hand made carpets that were exhibited by a group of production families in an exhibition :**

Family	First	Second	Third	Fourth	Fifth
No. of carpets	35	25	5	15	20

Represent these data by a histogram.

9 **The table below represents the number of pupils in the first four grades, in a primary school :**

Grade	First	Second	Third	Fourth
Number of pupils	80	60	100	70

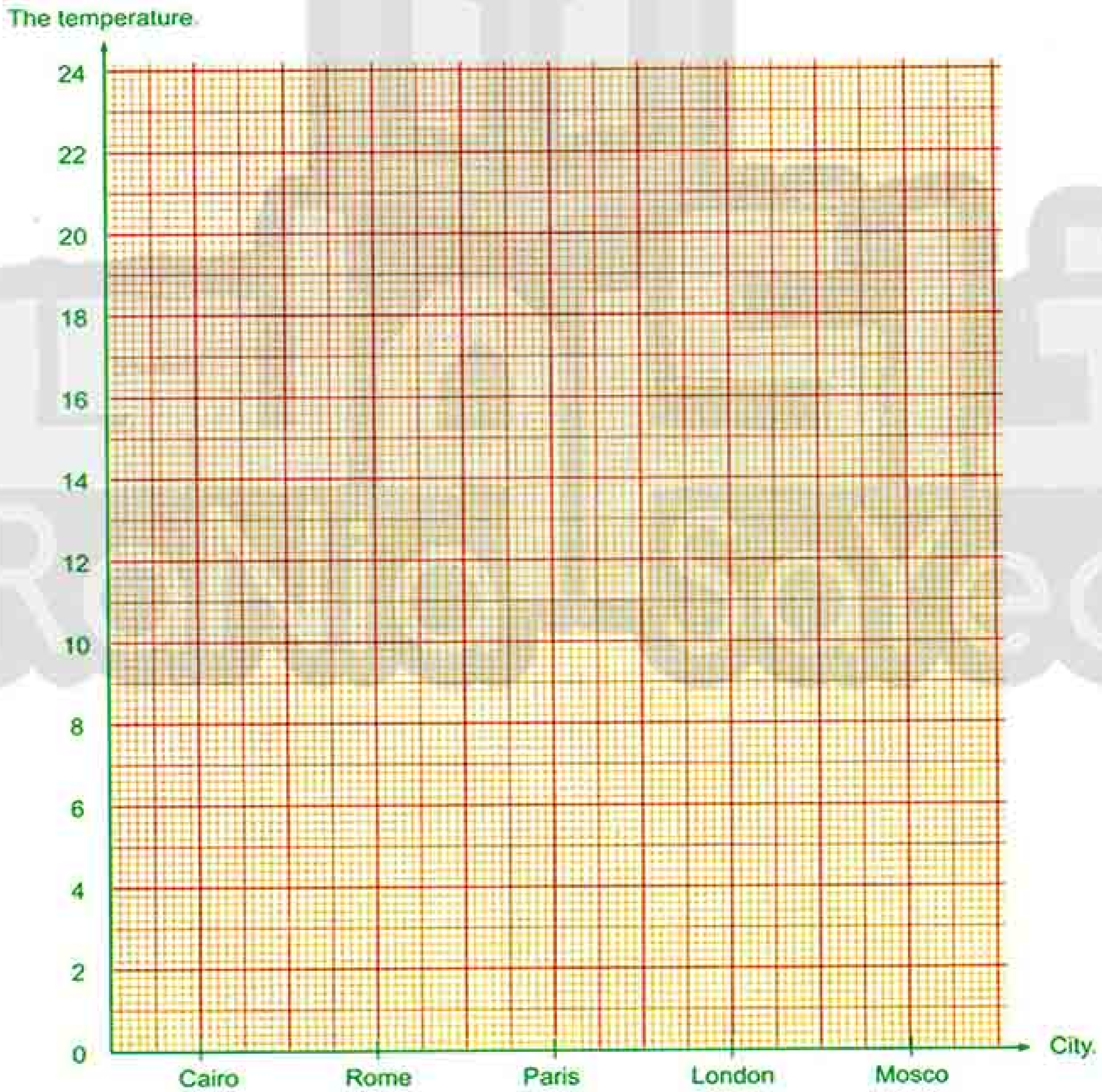
Represent these data by a histogram.

Lesson 1

10 **The following table shows the maximum and the minimum temperature in five capitals during one day :**

Capital / Max. and min.	Cairo	Rome	Paris	London	Mosco
Maximum	24	18	9	12	6
Minimum	16	10	5	7	2

Represent these data by double bars graph.

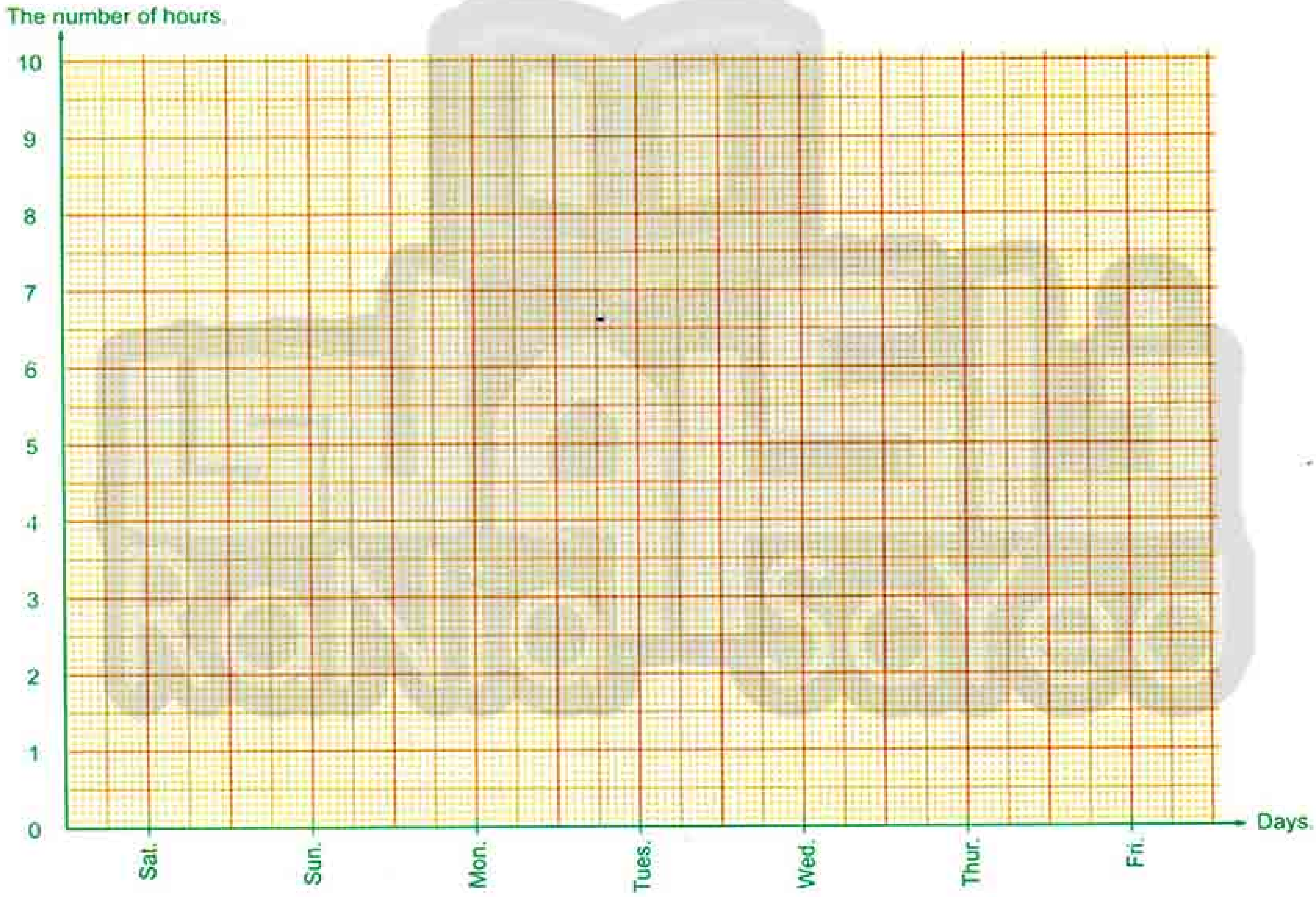


11 The following table indicates how many hours per night Manal slept for the last two weeks :

	Sat.	Sun.	Mon.	Tues.	Wed.	Thur.	Fri.
Week 1	7	6	9	5.5	6.5	8.5	10
Week 2	8	7.5	6.5	7	5	6	9

a Represent these data using the double bars graph.

b How many hours did Manal sleep for the last two weeks ?

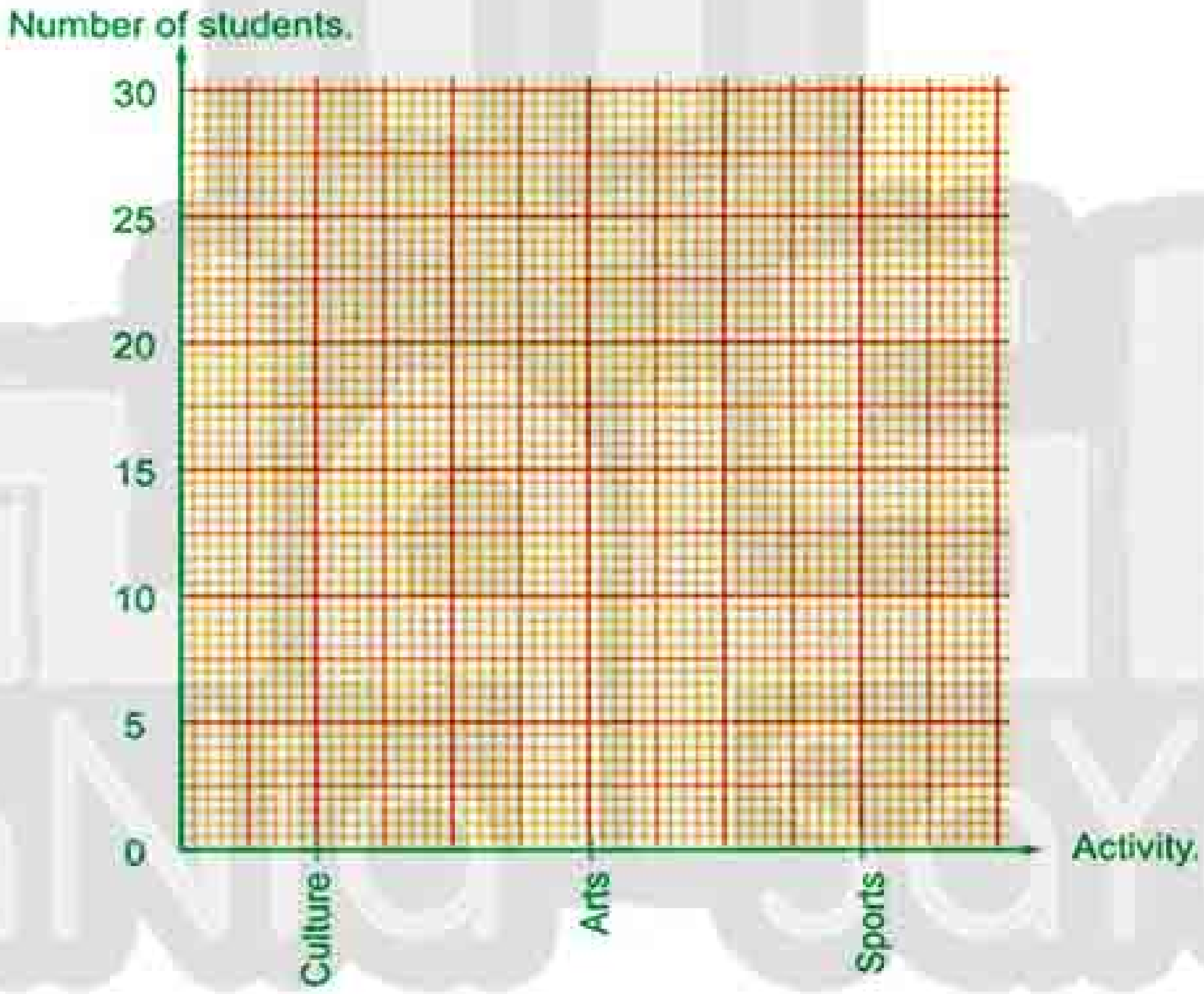


Lesson 1

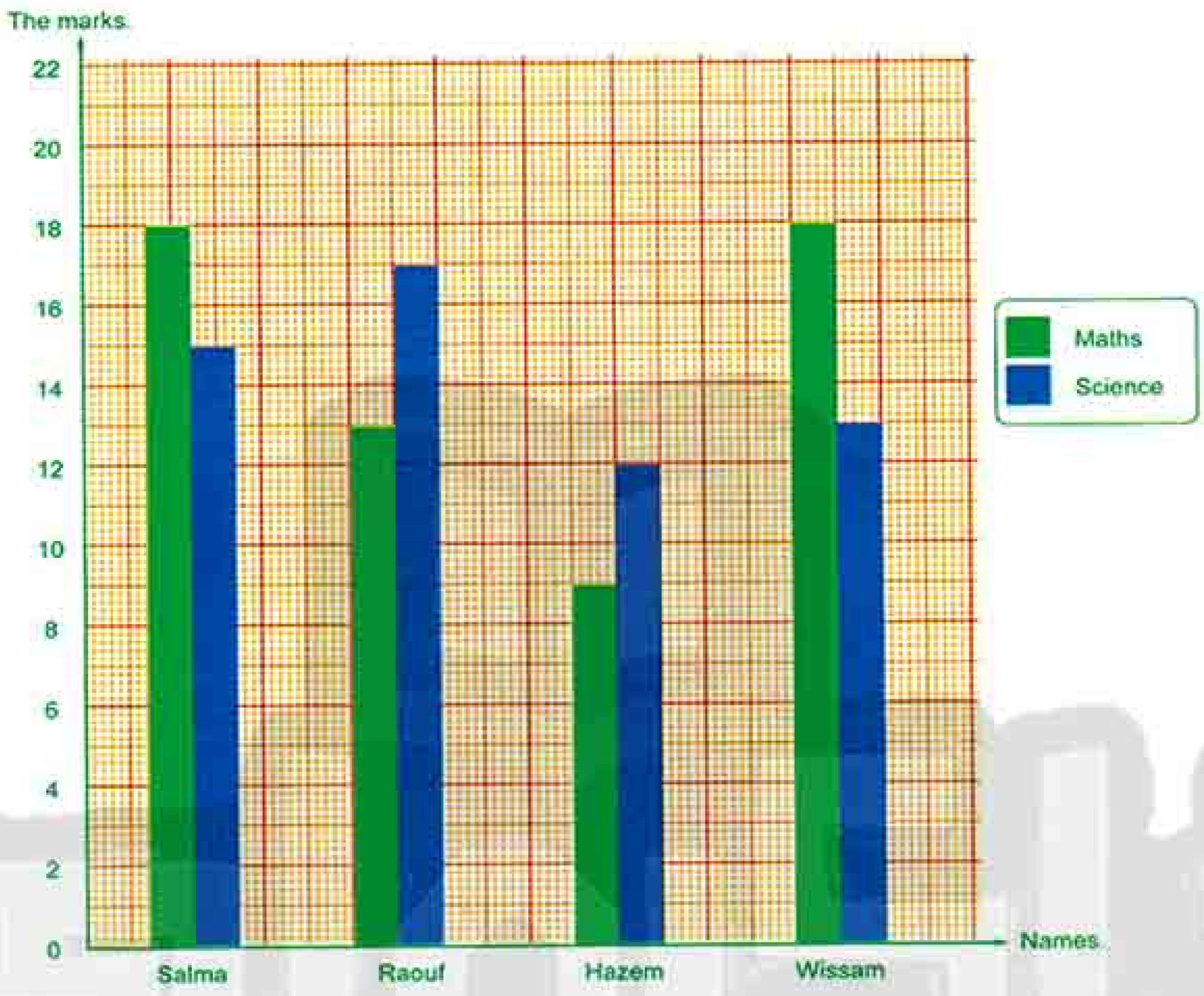
12 **The table below represents the number of students taking part in school activities for primary four and five :**

Represent the data of the table in the opposite coordinate plane using double bars.

Activity	Culture	Arts	Sports
Primary 4 students	10	15	30
Primary 5 students	20	25	15



13 The following double bars shows the marks of four pupils in maths and science :



a Which pupil got the greatest mark in science ?

b Which pupil got the lowest mark in maths ?

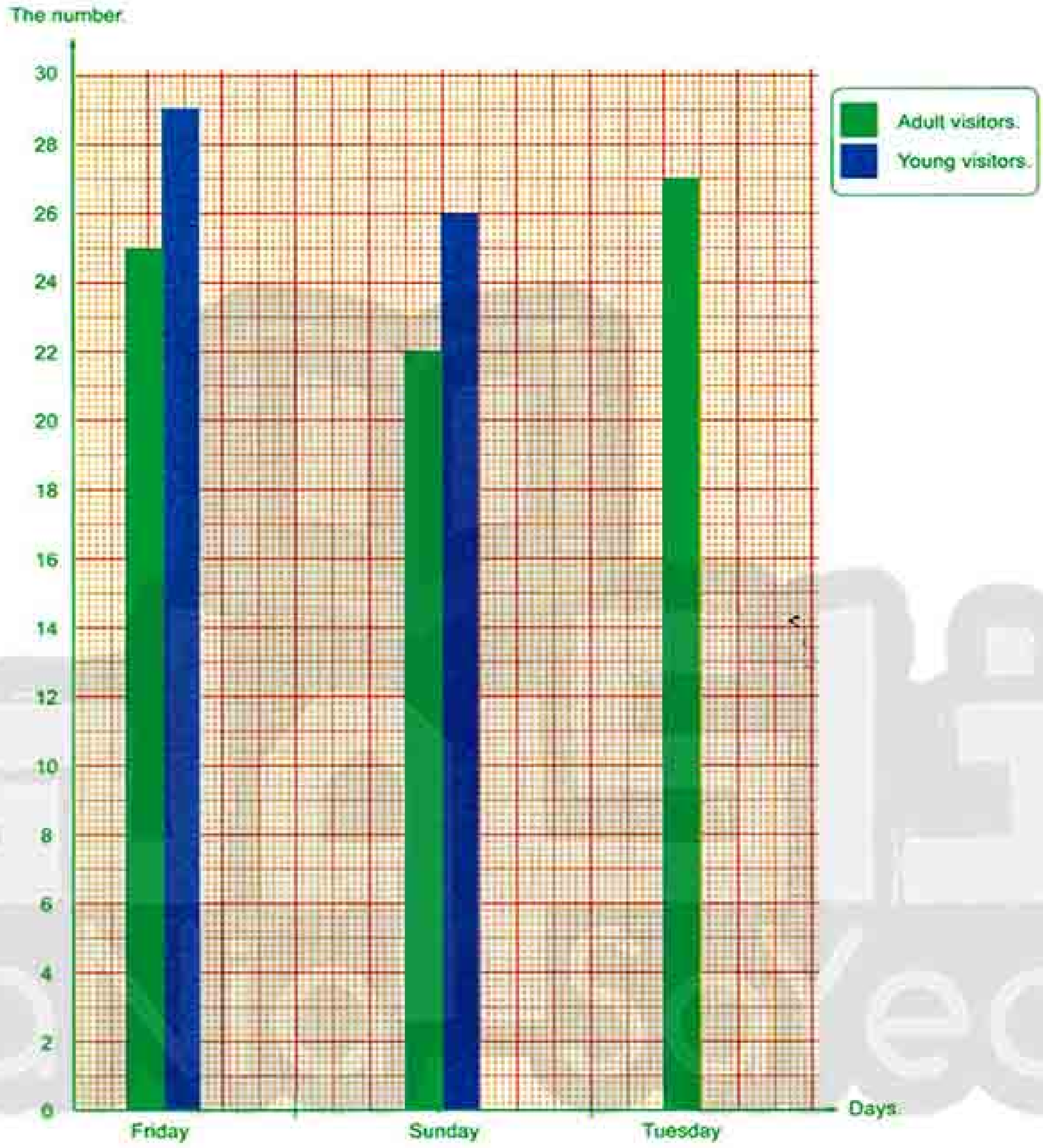
c Which pupil got the greatest marks in maths and science together ?

d Complete the following frequency table :

Name	Salma	Raouf	Hazem	Wissam
Marks in maths	....	....	....	....
Marks in science	....	....	....	....

Lesson 1

14 The following frequency table shows a part of the number of adult visitiors and young visitors to a museum in 5 days. The double bars shows the other part of these numbers :



a Complete the frequency table and the double bars graph :

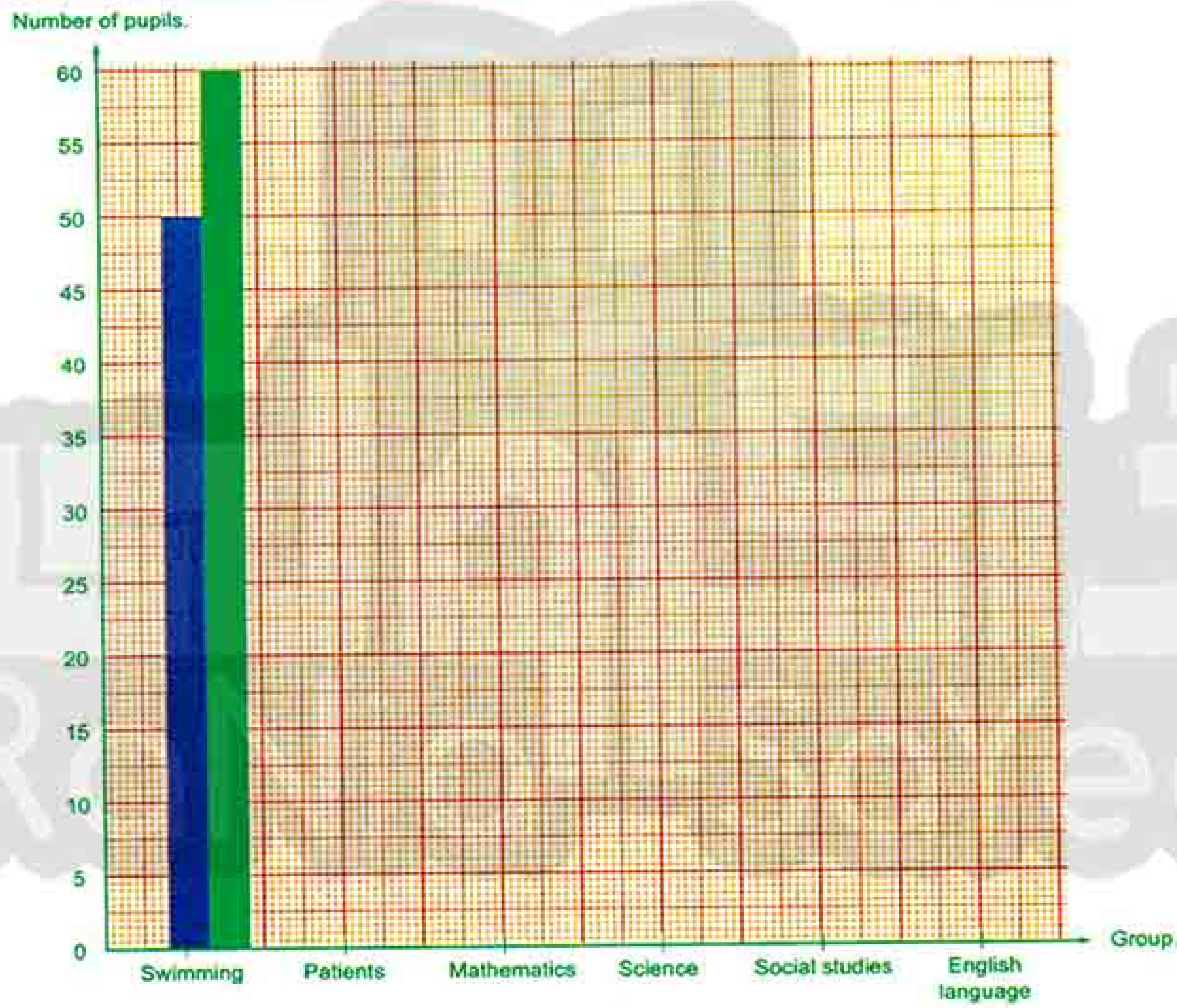
Days	Friday	Saturday	Sunday	Monday	Tuesday
Adult visitors	....	16	....	14	....
Young visitors	....	24	....	19	11

b How many young visitors went to the museum during these five days ?

c How many adult visitors went to the museum during these five days ?

15 📖 **The table below shows the number of pupils, in two schools, taking part in the groups of school activities. Complete representing these data by double bars, then answer the questions.**

Group / School	Swimming	Patients	Mathematics	Science	Social studies	English language
First	50	45	3	25	30	20
Second	60	50	2	20	25	15



a Which school has the greater number of pupils in the mathematics group?

....

b What is the number of pupils in the swimming group in both schools? What is the difference between them ?

....

c Which school has the larger number of pupils in the school activities?

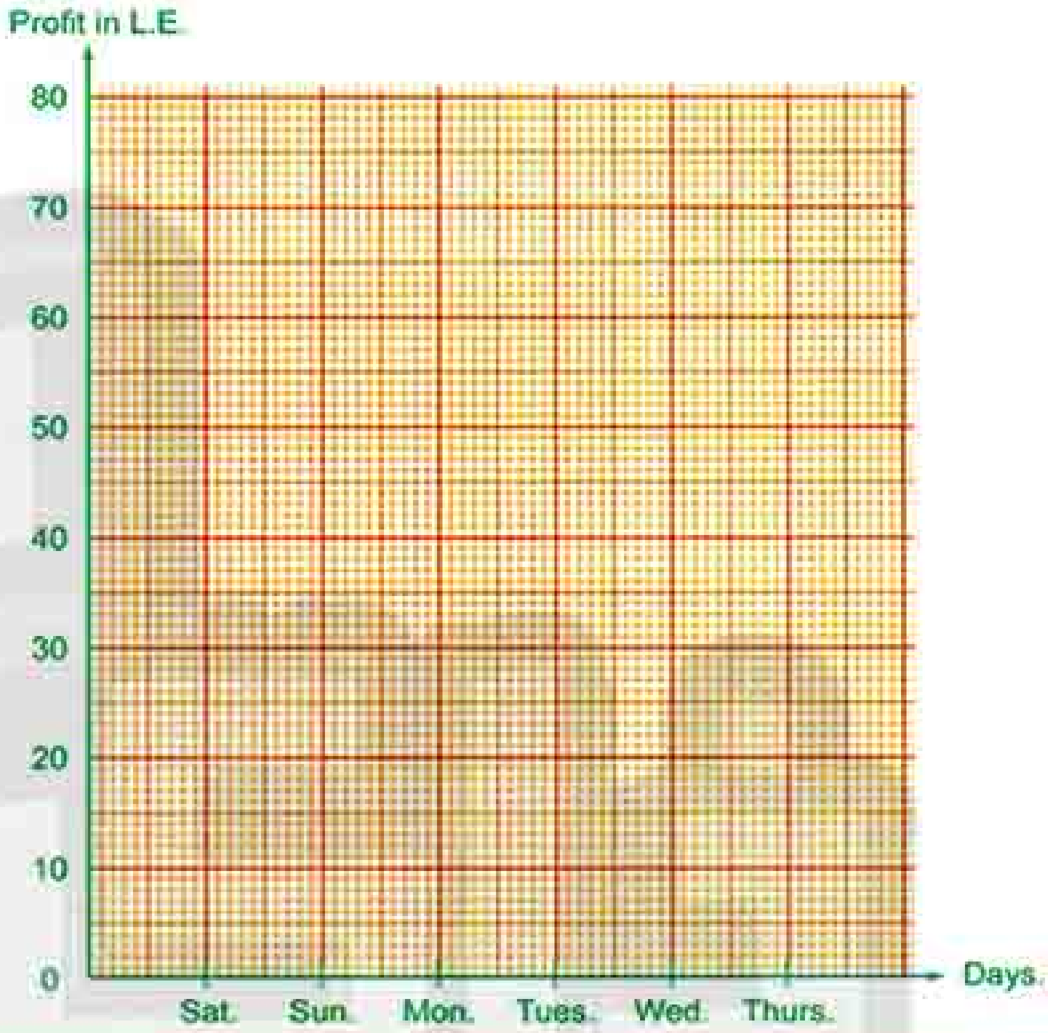
....

Lesson 1

16 **The following table shows the daily profit in L.E. of three merchants in one week :**

Merchant \ Day	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.
Merchant A	50	60	40	70	50	55
Merchant B	40	45	60	35	55	55
Merchant C	60	75	60	45	35	55

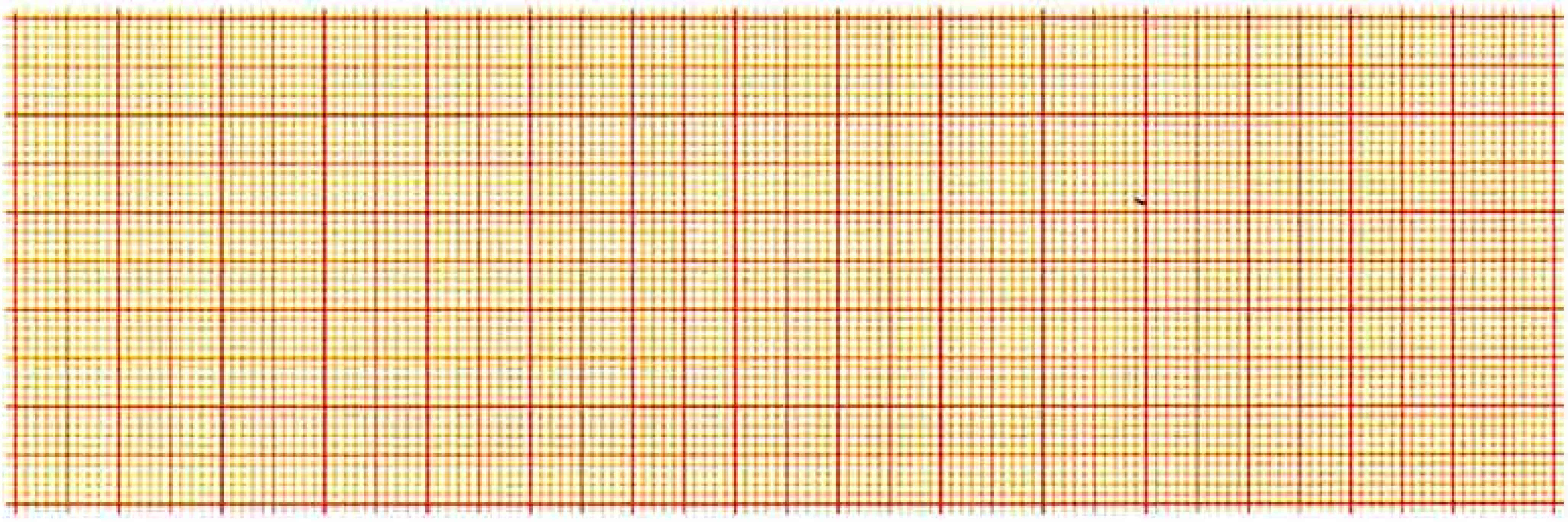
Represent these data by triple bars.



17 **The table below shows the number of hours that Walid and Fouad spend to study their lessons in a week :**

Pupil \ Day	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday
Walid	3	4	3	6	4	2
Fouad	4	5	2	5	5	3

Represent these data by a double bars graph.



18 The following table shows the money saved by Ahmed and Omar in 4 weeks :

Week / Name	1^{st}	2^{nd}	3^{rd}	4^{th}
Ahmed	7	6	10	12
Omar	6	8	10	15

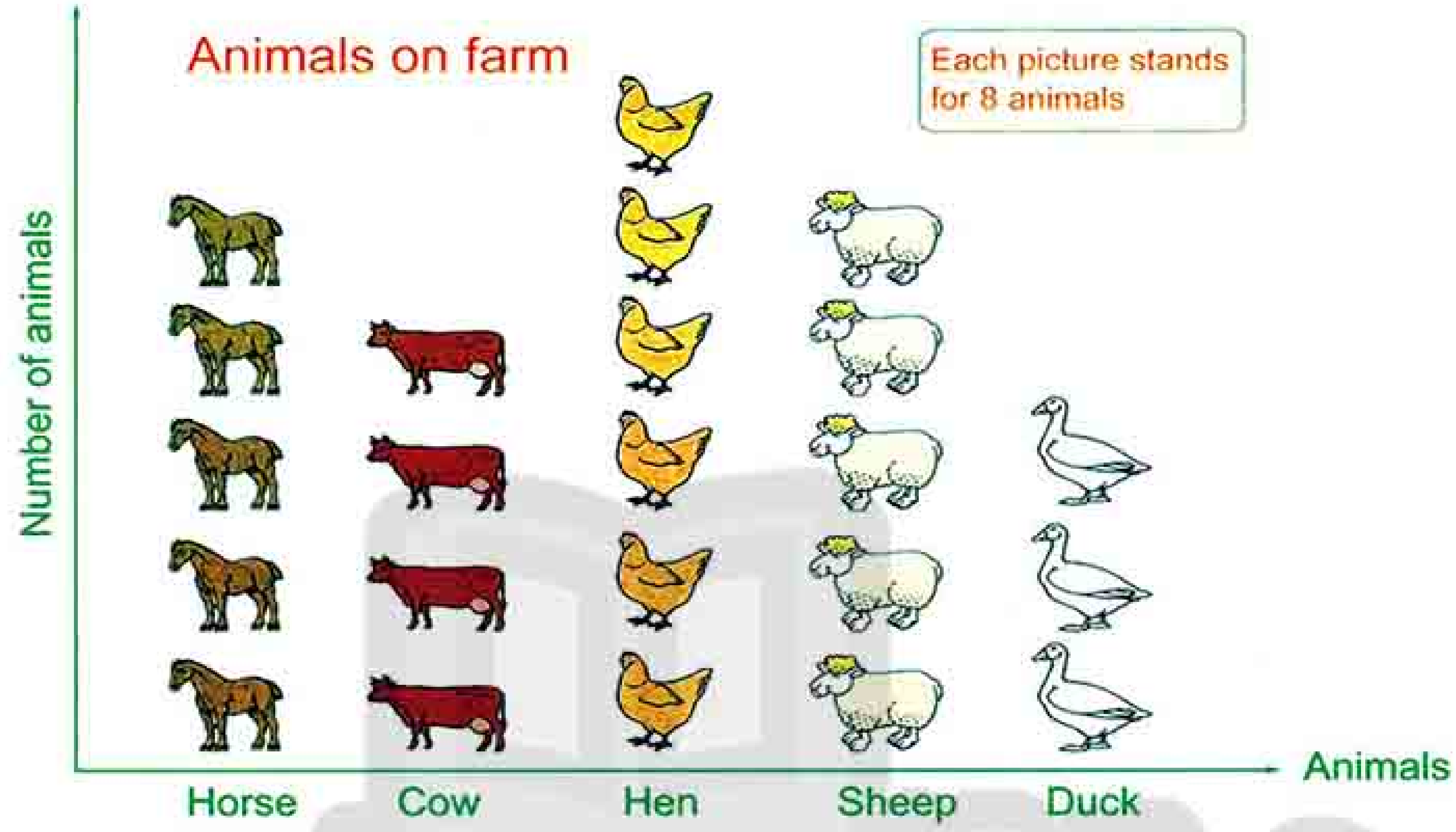
Represent these data by a double bars graph , then answer the following questions :

a At what week did Ahmed save least ?

b At what week did Ahmed and Omar save equally ?

Lesson 7

19 The following picture shows the number of each animal on Maged's farm :



a Complete :

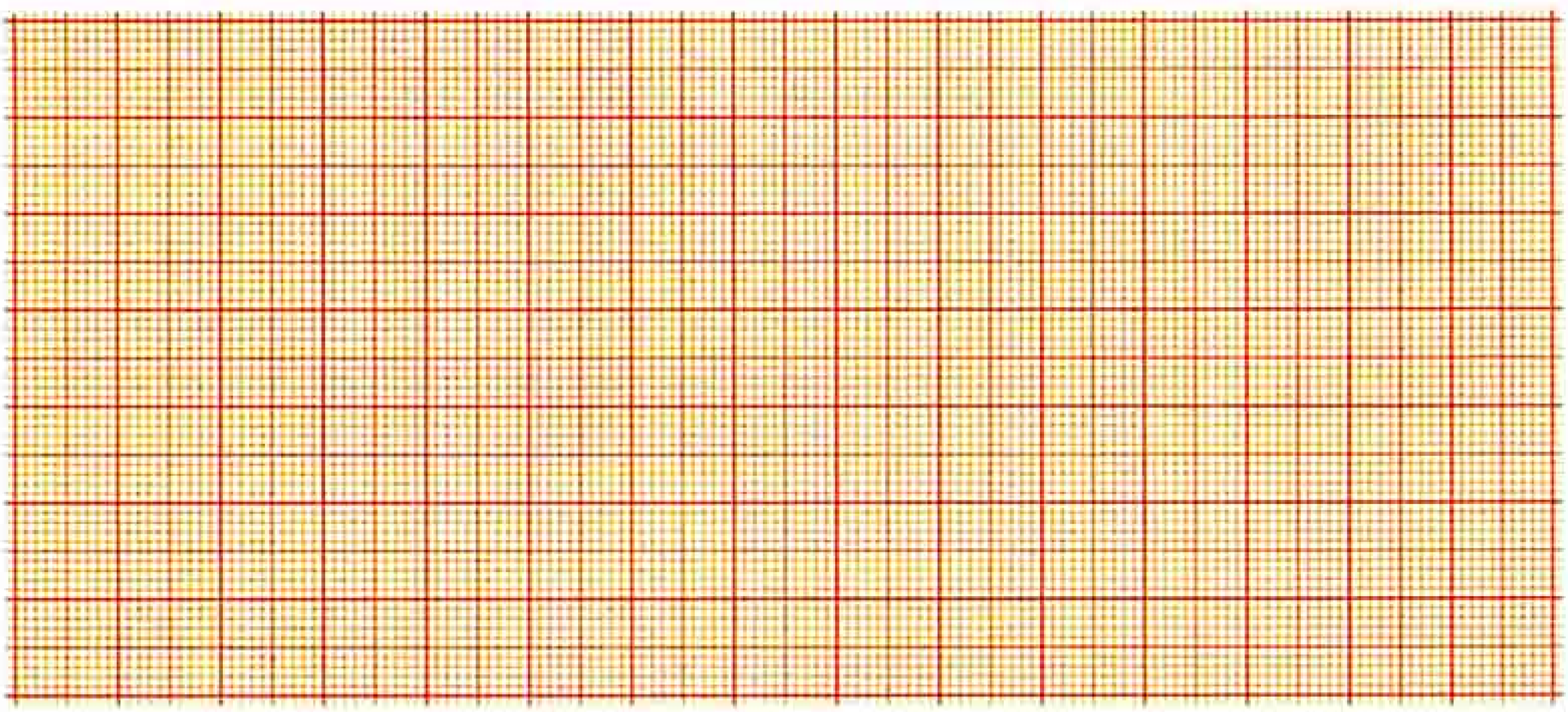
1.

Animal	Horse	Cow	Hen	Sheep	Duck
No. of animals	40	…………	…………	…………	…………

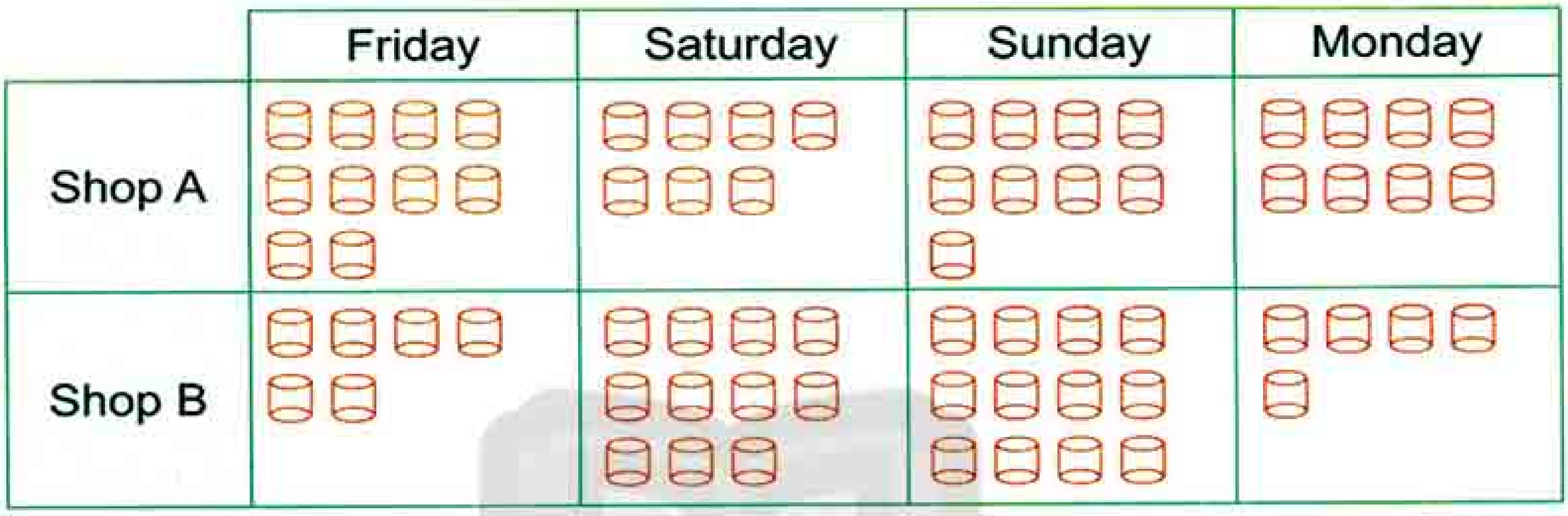
2. The greatest animal in number is ……………… There are ……………… on the farm.

3. There are equal numbers of ……………… and ………………

b Represent these data using the histogram.



20 The following table shows the number of canned drinks sold by two different shops in four days. Each ⌸ represents 5 cans :



a Complete the following frequency table :

	Friday	Saturday	Sunday	Monday
Number of canned drinks sold by shop A	....	....	....	....
Number of canned drinks sold by shop B	....	....	....	....

b Represent these data using the double bars.

c What is the total number of cans sold by each shop ?

d What is the difference between the numbers of cans sold by the two shops ?

e What is the total profit of shop A, if the profit gained on each drink is 25 piastres ?

Lesson 7

21 Using the tree-diagram, find how many different 3-digit numbers are there using the digits 5 , 2 and 9

....

....

....

....

....

....

22 Using the tree-diagram, find how many different 4-digit numbers are there using the digits 6 , 3 , 0 and 8

(Indication : 0 can not be a thousands digit in a 4-digit number)

....

....

....

....

....

Lesson 2

Probability

Chance of occurrence of an event

- You know that an event is either **certain** , **possible** or **impossible** and the probability expresses the chance of occurrence of an event.

For Example

- The opposite balls are put in a bag.
  If we pick one ball , the probability of picking a red ball is a **certain event**.

- The opposite balls are put in a bag.
  If we pick one ball , the probability of picking a red ball is a **possible event**.

- The opposite balls are put in a bag.
  If we pick one ball , the probability of picking a red ball is an **impossible event**.

Lesson 2

Calculating probability

- The probability is a number from 0 to 1 that measures the likelihood or the chance of an event occurring.
- The probability of the impossible event = 0
- The probability of the certain event = 1
- The probability of the possible event is between zero and 1 (proper fraction or decimal).

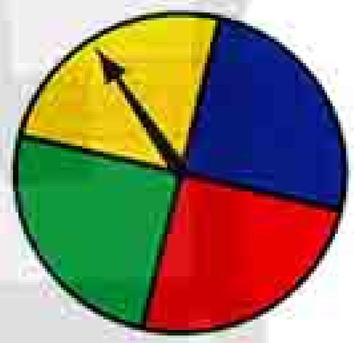
Generally

Probability of an event A

$$P(A) = \frac{\text{The number of ways event A can occur}}{\text{The total number of possible outcomes}}$$

Example 1

A spinner has 4 equal sectors coloured yellow, blue, green and red.



After spinning the spinner, what is the probability of landing on each colour ?

Outcomes

The possible outcomes of this experiment are yellow, blue, green and red.

Probabilities :

$$P(\text{yellow}) = \frac{\text{Number of ways to land on yellow}}{\text{Total number of colours}} = \frac{1}{4}$$

$$P(\text{blue}) = \frac{\text{Number of ways to land on blue}}{\text{Total number of colours}} = \frac{1}{4}$$

$$P(\text{green}) = \frac{\text{Number of ways to land on green}}{\text{Total number of colours}} = \frac{1}{4}$$

$$P(\text{red}) = \frac{\text{Number of ways to land on red}}{\text{Total number of colours}} = \frac{1}{4}$$

Example 2

A single 6-sided die is rolled.
What is the probability of each outcome ?
What is the probability of rolling an even number ?
What is the probability of rolling an odd number ?

Outcomes :

The possible outcomes of this experiment are 1 , 2 , 3 , 4 , 5 and 6

$$P(1) = \frac{\text{Number of ways to roll a 1}}{\text{Total number of sides}} = \frac{1}{6}$$

$$P(2) = \frac{\text{Number of ways to roll a 2}}{\text{Total number of sides}} = \frac{1}{6}$$

$$P(3) = \frac{\text{Number of ways to roll a 3}}{\text{Total number of sides}} = \frac{1}{6}$$

$$P(4) = \frac{\text{Number of ways to roll a 4}}{\text{Total number of sides}} = \frac{1}{6}$$

$$P(5) = \frac{\text{Number of ways to roll a 5}}{\text{Total number of sides}} = \frac{1}{6}$$

$$P(6) = \frac{\text{Number of ways to roll a 6}}{\text{Total number of sides}} = \frac{1}{6}$$

$$P(\text{even}) = \frac{\text{Ways to roll an even number}}{\text{Total number of sides}} = \frac{3}{6} = \frac{1}{2}$$

$$P(\text{odd}) = \frac{\text{Ways to roll an odd number}}{\text{Total number of sides}} = \frac{3}{6} = \frac{1}{2}$$

Notice that :

The sum of probabilities of all possible events = 1

Exercise 20

Probability

From the school book

1 Choose certain , possible or impossible to describe each of the following events :

a Getting a number greater than 6 , when a die is thrown once ....

b Picking a red marble from a box which contains 7 purple marbles ....

c Picking a green card from a set which contains 12 green cards ....

d Getting a number from 1 to 6 , when a die is thrown once ....

e Picking a yellow marble from a box which contains 5 white marbles and 3 yellow marbles ....

f The sun rises from west ....

2 Complete :

a The probability of the impossible event is ....

b The probability of the certain event is ....

c The sum of probabilities of all possible events = ...

d Probability of appearance of head when tossing a coin = ...

e Probability of getting the number 5 on the upper face when rolling a dice = ...

f If the probability of a student's failure is 0.2 , then the probability of his success is ....

3 **A bag contains 5 red balls and 3 green balls.If a ball is chosen at random from the bag , write the probability of each of the following events :**

a Choosing a red ball.

b Choosing a yellow ball.

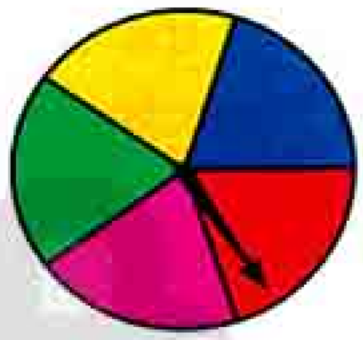
c Choosing a green ball.

d None of these.

4 **A teacher chooses a student at random from a class of 30 boys. What is the probability that the chosen student is a boy ? "Choose"**

a $\frac{1}{30}$ **b** $\frac{1}{29}$ **c** 0 **d** 1

5 A spinner has 5 equal sectors coloured yellow , blue , green , pink and red.After spinning the spinner , what is the probability of landing on each colour ?



....

6 If you have a jar of jelly beans and you have the following colours : 5 red , 7 pink , 3 white , 5 black and 3 orange. What is the probability that you will pick out a white jelly bean ?

....

7 A card from the opposite bag is chosen at random. Calculate the probability of picking a black card.

....

8 **In an experiment of tossing a single die once and observing the number on the top face , complete :**

a The probability of getting the number 5 = ...

b The probability of getting an even number = ...

c The probability of getting an odd number = ...

d The probability of getting a number greater than 6 = ...

e The probability of getting a number less than or equal to 6 = ...

f The probability of getting a prime number = ...

g The probability of getting a prime even number = ...

h The probability of getting a number divisible by 5 = ...

i The probability of getting a number divisible by 3 = ...

---

9 **The opposite spinner has 20 sectors marked by the numbers 1 , 2 , 5 and 10 If the spinner is spun , what is the probability that the arrow will stop at the sector that is :**

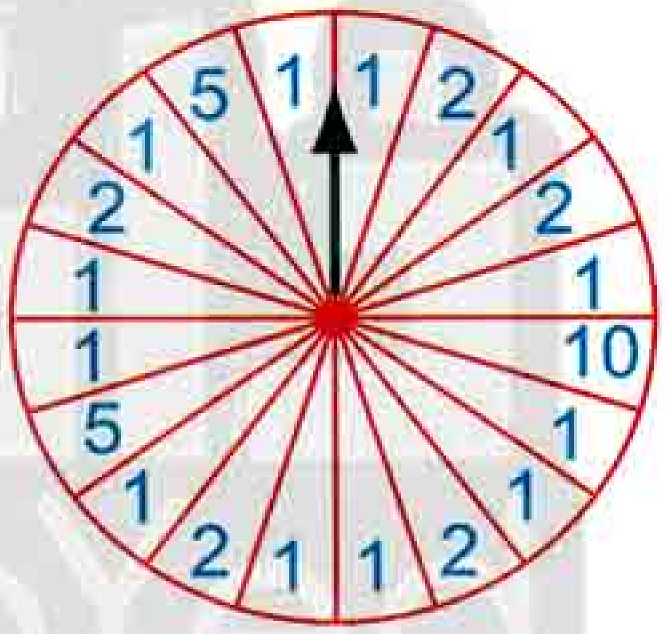
a Marked with (1) ?

b Marked with (2) ?

c Marked with (10) ?

d Marked with (4) ?

e Marked with a number ?



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10 **Complete :**

a 10 cards are numbered from 1 to 10 One card is selected at random. The probability that the seclected card has an odd number is ....

b A single die is thrown once. The probability of appearance of number 3 on the top face is ....

c A box contains 5 white balls , 7 red balls and 3 blue balls. A ball is drawn randomly from the box. The probability that the drawn ball is blue equals ....

d A die is rolled once and the number of points on the top face is observed. The probability of appearance of a number less than one is ....

e A box contains 48 apples , 4 of them are bad. One apple is drawn from the box randomly. The probability that the drawing apple is bad equals .... and the probability that it is not bad equals ....

f If the probability of the occurrence of an event is $\frac{5}{8}$, the probability of the non-occurrence of this event is ....

g A room has 3 doors numbered from 1 to 3 One student goes out from one door. The probability that he goes out from the second door is ....

---

11 **A card from the opposite bag is chosen at random :**

a Calculate the probability of picking a number less than 8

b Calculate the probability of picking a number more than 5

c Calculate the probability of picking a number between 2 and 7

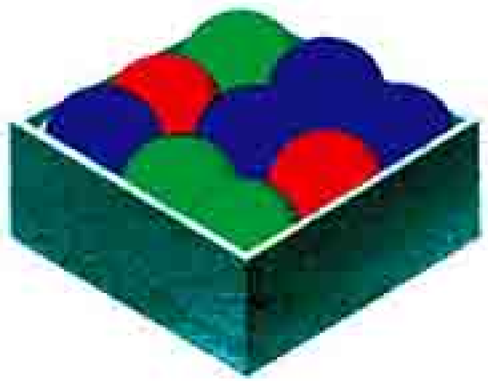
---

12 A jar contains 6 green marbles , 11 black marbles and 8 pink marbles. A marble is drawn at random.Calculate the probability of getting a non-pink marble.

....

Lesson 2

13 **A box contains 4 blue balls , 2 red balls and 3 green balls , all are equal in size.If a ball is drawn blindly , complete :**



a Probability of drawing a blue ball = $\frac{4}{\cdots}$

b Probability of drawing a red ball = $\frac{\cdots}{9}$

c Probability of drawing a green ball = $\frac{\cdots}{\cdots}$

d Probability of drawing a non-blue ball = 1 – $\frac{\cdots}{\cdots}$ = ...

e Probability of drawing a non-red ball = 1 – $\frac{\cdots}{\cdots}$ = ...

---

14 **Five cards are numbered from 1 to 5 One card is chosen randomly and the number on it is noticed. Find :**

a The probability that the card is numbered by 4

b The probability that the card is numbered by an odd number.

c The probability that the card is numbered by 2 or 5

d The probability that the card is numbered by a prime number.

---

15 **A glass jar contains 6 red marbles , 5 green marbles , 8 blue marbles and 3 yellow marbles. If a single marble is chosen at random from the jar. What is the probability of choosing :**

a a green marble ?　　b a blue marble ?

c a yellow marble ?　　d a red marble ?

---

16 **A box contains 5 red balls , 3 yellow balls and two black balls. One ball is chosen at random from the box. Find the probability that the chosen ball is :**

a yellow.　　b yellow or red.　　c not yellow.

17 The following coins are put in a bag.

If we pick one coin , calculate the probability of picking :

a 5 piastres. **b** 10 piastres. **c** 20 piastres. **d** 25 piastres.

e 50 piastres. **f** L.E. 1 **g** L.E. 5 **h** L.E. 2

---

18 Circle the correct answer :

a The probability of the impossible event = ... (0 or 1 or $\frac{1}{2}$ or $\frac{1}{3}$)

b The probability of the certain event = ... (0 or 1 or $\frac{1}{2}$ or $\frac{1}{3}$)

c The probability of the certain event .... the probability of the possible event. ($<$ or $=$ or $>$)

d The probability of a possible event may be .... (1 or 1.5 or 0 or $\frac{1}{3}$)

e When you flip a coin once , the probability of getting a tail = ... (0 or 1 or $\frac{1}{2}$ or 2)

f When you throw a dice once , the probability of getting the number 3 is .... ($\frac{1}{6}$ or $\frac{3}{6}$ or 1 or 3)

g When you draw a card from 8 cards numbered from 1 to 8 , the probability of getting the number 4 is .... ($\frac{1}{2}$ or $\frac{1}{4}$ or $\frac{1}{8}$ or 4)

Lesson 2

h A basket contains 5 white balls , 3 yellow balls and 2 green balls.

If you draw one ball , the probability of getting a white ball = ...

($\frac{3}{10}$ or $\frac{3}{5}$ or $\frac{5}{8}$ or $\frac{1}{2}$)

---

19 A number from 20 to 29 is chosen at random. Calculate the probability of getting a number divisible by 2

....

---

20 **A card from the following cards is chosen at random :**

a Calculate the probability of getting a number divisible by 2

b Calculate the probability of getting a number divisible by 3

c Calculate the probability of getting a number divisible by 4

d Calculate the probability of getting a number divisible by 5

e Calculate the probability of getting a number divisible by 6

f Calculate the probability of getting a number divisible by 7

g Calculate the probability of getting a number divisible by 8

h Calculate the probability of getting a number divisible by 9

i Calculate the probability of getting a prime number.

Activities from the school book

Activity 1

The production of one of the crops was as shown in the table (numbers are in thousands of tons) :

Year	1960	1965	1980	1985	2000	2005
Amount	25	30	50	55	75	80

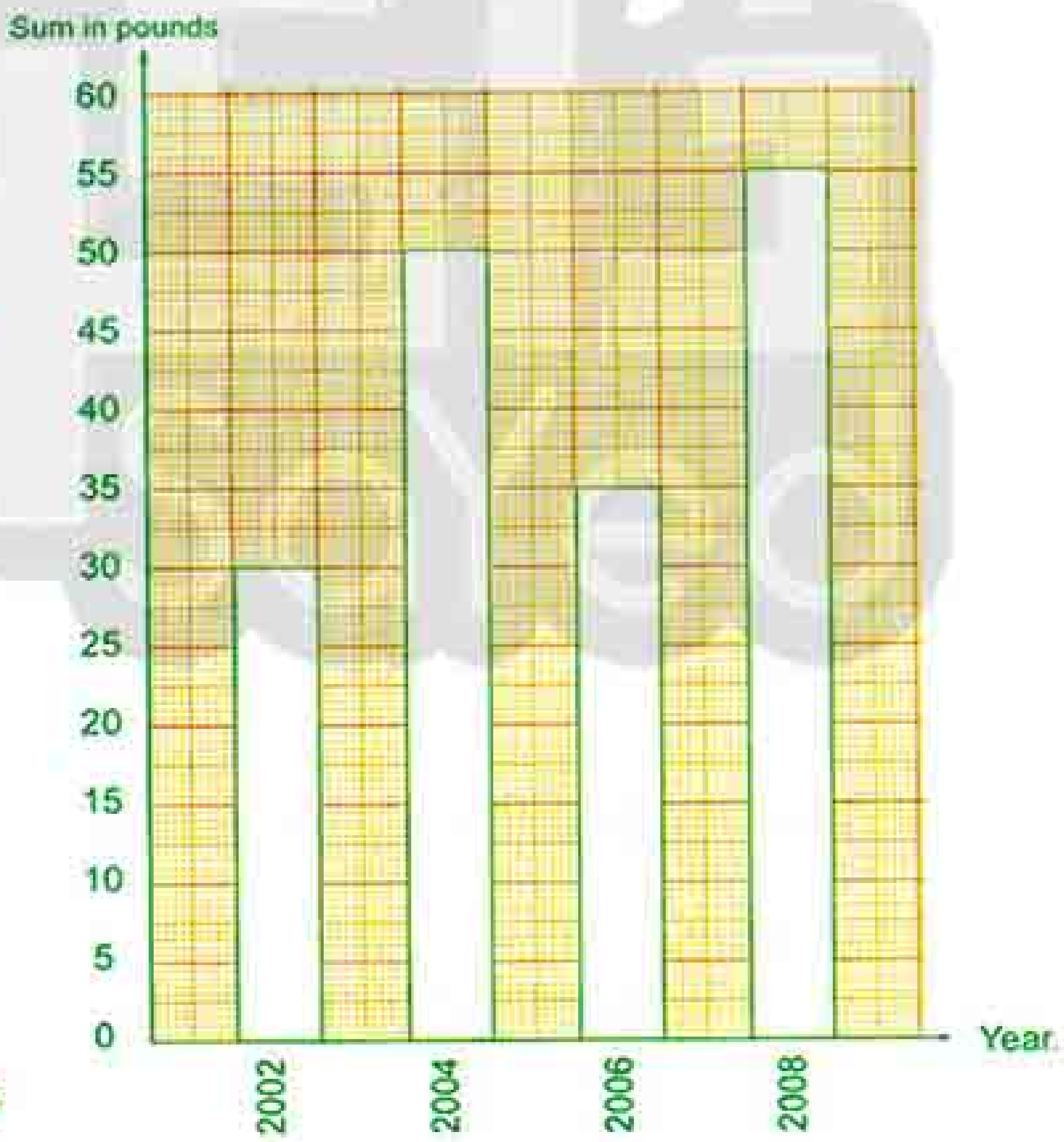
a Choose a graphic method to represent these data.

b Represent these data according to the method you choose.

c If the production of this crop continues to raise in the same rate , what do you expect the production to be between 2020 and 2025 ?

Activity 2

Read the opposite graph which shows the money saved by Samira , in pounds , for some years , then answer :



a Form a table showing Samira's savings as in the graph.

b What is the total sum of money saved by Samira ?

Activity 3

A box contains 5 red balls , 3 blue balls and 4 green balls , all of the same size. A ball was drawn blindly. Complete :

a Probability of getting a blue ball is ....

b Probability of getting a non-green ball is ....

c Probability of getting either red or green ball is ....

GENERAL EXERCISE

From the school book

Unit Four "Statistics and probability"

1 Choose the correct answer from those given :

1 The event of (the sun rises from the west) is .... event.

a. impossible   b. certain   c. its probability = 1

2 The probability of appearing a head as throwing a metallic coin = ...

a. 1   b. $\frac{1}{2}$ c. zero   d. $\frac{2}{3}$

3 The probability of appearing an odd number on the upper face of die = ...

a. $\frac{1}{6}$ b. $\frac{2}{6}$ c. $\frac{3}{4}$ d. $\frac{1}{2}$

4 The probability of the impossible event = ...

a. zero   b. 1   c. 0.5   d. 0.3

5 The probability of the certain event = ...

a. zero   b. 0.5   c. 1   d. 2

6 .... is from the methods of collecting data.

a. symmetry   b. congruence   c. observation

2 Complete each of the following :

1 The probability that the sun rises from the east is ....

2 The probability of appearing a head as throwing a metallic coin = ...

3 The probability of the impossible event = ...

3 Your have identical cards. You wrote the numbers (1 , 4 , 6 , 8 and 10) on them. If you draw one of these cards blindly. What is the probability that the card carries a number between (5 and 9) ?

Complete : The probability = ...

4 A box contains 5 red balls , 3 blue balls and 7 green balls , equal in size. If one ball is drawn blindly. Answer the following questions :

1 What is the probability that the drawn ball is blue ?

2 What is the probability that the drawn ball is not red ?

3 What is the probability that the drawn ball is green ?

4 What is the probability that the drawn ball is red or blue ?

5 The following table shows the number of pupils participating in a school activities :

The activity	Sport	Art	Culture
Number of pupils	40	20	30

Represent these data by histogram.

6 The following table shows the number of pupils in the first four grades in a primary school :

The grade	First	Second	Third	Fourth
Number of pupils	80	70	100	70

Represent these data by histogram.

General Exercise

7 **The following table shows the marks of some school subjects of two girls pupils in a school :**

Complete representation of these data by double bars , showing that in your answer sheet.

Subject / The pupil	Math	Science	Social studies	English
First	30	25	30	20
Second	20	20	25	15

8 **The following table shows the saved money of Hosam and Mohamed in pounds within 4 successive weeks :**

Week / Name	First	Second	Third	Fourth
Hosam	9	4	5	10
Mohamed	7	8	12	3

Represent these data by double bar charts.

9 **The following table shows the number of pupils in first four grades in a primary school :**

The grade	First	Second	Third	Fourth
Number of pupils	55	65	40	70

Represent these data by histogram.

Test on Unit Four

1 Choose the correct answer from the given ones :

1. The probability of the certain event = ………… (0 or 1 or $\frac{1}{2}$ or 2)
2. When you flip a metallic coin once , the probability of getting a tail = ………… (0 or 1 or $\frac{1}{4}$ or $\frac{1}{2}$)
3. From the methods of collecting data is ………… (symmetry or congruence or observation or probability)
4. The probability of getting the number 4 on the upper face when rolling a fair dice once = ………… ($\frac{1}{2}$ or $\frac{1}{3}$ or $\frac{1}{4}$ or $\frac{1}{6}$)
5. A box contains 2 red balls and 3 green balls , all are equal in size , if a ball is drawn randomly , then the probability of drawing a red ball is ………… ($\frac{2}{3}$ or $\frac{2}{5}$ or $\frac{3}{5}$ or $\frac{3}{2}$)
6. The sum of probabilities of all possible events = ………… (0 or $\frac{1}{2}$ or 1 or 2)

2 Complete the following :

7. The probability of the impossible event = …………
8. If the probability of the occurrence of an event is $\frac{5}{9}$, then the probability of non-occurrence of this event is …………
9. Data are collected by using ………… , ………… and …………
10. As tossing a fair dice once , the probability of getting an odd number is …………

TEST

3 Answer the following :

11 In a box , there are 5 red balls, 3 blue balls and 7 green balls , a ball is drawn randomly. What is the probability that the drawn ball is :

a. blue ? **b.** not red ?

c. green ? **d.** black ?

....

....

12 The following table shows the number of pupils in each grade :

Grade	First	Second	Third	Fourth	Fifth
Number of pupils	30	25	20	35	40

Represent these data using a bar line graph.

13 10 identical cards numbered from 1 to 10, if a card is chosen randomly. Find the probability that the drawn card is :

a. an even number. **b.** a prime number.

c. a number divisible by 3 **d.** a number more than 10

....

....

14 The following table shows the maximum and the minimum temperature in five capitals during one day :

Capital / Temperature	Cairo	Rome	Paris	London	Mosco
Maximum	24	18	9	12	6
Minimum	16	10	5	7	2

Represent these data by a double bars graph.

Glossary

A

according to بالنسبة إلى
add يجمع
adding الجمع
abult بالغ/راشد
also أيضًا
ampule أنبولة
angle زاوية
apperance ظهور
approximate يقرّب
approximately تقريبًا
approximating التقريب
arrange يرتب
ascending تصاعدى

B

balance ميزان/إتزان
bar line عمود
bathing استحمام
between بين
bike دراجة
blindly على نحو أعمى
blood دم
both كُلًا
bottom أسفل
bowl وعاء أجوف
bracelet سوار
bucket دلو

C

cancel يحذف
capacity سعة
case حالة
cement أسمنت
certain مؤكد
chance فرصة
classify يصنف
coin عملة معدنية
collecting تجميع
compination اتحاد/ضم
common مشترك
company شركة
compare يقارن
comparing مقارنة
congruency تطابق
congruent مطابق لـ
consecutive متتالى
consist of يتكون من
contain يحتوى
convert يتحول
converting تحويل
corresponding to بالنسبة لـ
crop محصول
cube مكعب

D

data معلومات
day يوم
decimal number عدد عشرى
denote يُرمز بـ
descending تنازلى
determine يعيّن
diagram شكل/ مخطط
dice حجر النرد
die حجر النرد
different مختلف
digit رقم

Glossary

dining room	حجرة الطعام
displaying	عرض / إظهار
divide	يقسم
dividing	القسمة
divisible	يقبل القسمة
double	ضعف
double bars	أعمدة مزدوجة
drawn	مختار
drop	نقطة
during	خلال

E

east	الشرق
eighth	ثُمن / الثامن
employee	موظف
empty	فارغ
enough	كافى
enrich	يُغْنِى
envelope	ظرف بريد
equal to	مساوٍ لـ
equality	التساوى
equally	بالتساوى
equilateral triangle	مثلث متساوى الأضلاع
equivalent	متكافئ
estimate	يخمّن / يتوقع
etc.	إلى آخره
even number	عدد زوجى
event	حدث
exact	صحيح / مضبوط
exactly	بالضبط
exhibition	معرض
exist	يوجد
experiment	التجربة
experimenting	التجريب / الاختبار
express	يعبّر عن

F

failure	راسب
feast	عيد
field	مجال
first	أولاً
flock	سِرب / قطيع
flow	يرتفع
fold	يطوى
form	شكل / صورة
fraction	كسر

G

gain	يربح / يكسب
geometry	الهندسة
go back	يعود
goods	بضائع
gram (gm.)	جرام
greater	أكبر
greatest	الأكبر

H

half	نصف
hand made	صناعة يدوية
happen	يحدث
heart	قلب
heaviness	وزن
hexagon	شكل سداسى الأضلاع
historgram	المدرج التكرارى
hold	يملك
horizontally	أفقيًا
hour	ساعة
human	بشري

Glossary

hundred thousand	مئة ألف
hundreds	مئات
hundredth	جزء من مئة

I

identical	منتظم
identify	يماثل / يطابق
impossiple	مستحيل
improper fraction	كسر غير اعتيادى
include	يتضمن
independent	يعتمد على
indication	إظهار
infinite	غير منتهى
inside	داخل
instead of	بدلًا من
instrument	أداة / وسيلة
integer	عدد صحيح
investment	استثمار / توظيف أموال
iron	حديد
isosceles trapezium	شبه منحرف متساوى الساقين
isosceles triangle	مثلث متساوى الساقين

J

jar	جرّة / مرطبان
jug	إبريق

K

keep	يحافظ على
kilogram (kg.)	كيلو جرام
knowledge	معرفة

L

last	الأخير
least	الأقل
left	شمال / الباقى
length	طول
less	أقل
lie	يقع
likelihood	أرجحيّة
liquid	سائل
litre (L.)	لتر
load	يحمل

M

marble	بلية
maximum	الأقصى
mean	يعنى
meaning	معنى
measure	يقيس
measurement	القياس
metallic	معدنى
method	طريقة
middle	منتصف
millilitre (mL.)	ملليلتر
minimum	الأدنى
minute	دقيقة
mixed number	عدد كسرى
multiply	يضرب
multiplying	الضرب

N

necessary	ضرورى
new	جديد
next	التالى
noticing	ملاحظة

O

observe	يلاحظ
occurrence	حدوث

Glossary

odd number	عدد فردى
only	فقط
opposite	مقابل
order	يرتب / ترتيب
ordering	ترتيب
organizing	تنظيم
outcome	نتيجة

P

packet	رزمة صغيرة
paint	دهان
pan	كفة الميزان
parallelogram	متوازى الأضلاع
park	حديقة
pattern	نمط
pentagon	شكل خماسى الأضلاع
perfect	تام
period	دورة
person	شخص
picking	سحب
piece	قطعة
place	مكان
polygon	مضلع
possible	ممكن
pot	قِدْر
practical	عملى
previous	السابق
price	ثمن
prime number	عدد أولى
probability	الاحتمال
product	منتج / حاصل الضرب
profit	مكسب
proper fraction	كسر اعتيادى
pump	يضخ
put	يضع

Q

quarter	رُبع
quotient	خارج القسمة

R

rain	يمطر
random	عشوائى
rectangle	مستطيل
reduce	يستنتج
regular	منتظم
remainder	باقى
removing	حذف
replace	يبدّل
replacing	تبديل
represent	يمثل
required	مطلوب
review	يراجع
reviewing	مراجعة
rewrite	يعيد كتابة
rhombus	معيّن
right	يمين / صحيح
rolling	دحرجة
rule	قاعدة

S

satisfy	يحقق
save	يدخر
scale	ميزان
scalene triangle	مثلث مختلف الأضلاع
second	ثانيًا / ثانية
select	يختار

Glossary

sequence	تسلسل
set	مجموعة
side	جانب / ضلع
simplest	أبسط
simplify	يختصر
simplifying	الاختصار
since	منذ
smaller	أصغر
sometimes	أحيانًا
speed	سرعة
spend	يصرف
spinner	لعبة الدوارة
square	مربع
state	يذكر
statement	جملة
statistics	الإحصاء
step	خطوة
subtract	يطرح
subtracting	الطرح
success	ناجح
suitable	مناسب
sum	مجموع
sure	مؤكد
symbol	رمز
symbolize	يرمز
symmetrical	متماثل
symmetry	التماثل

T

ten thousand	عشرة آلاف
tens	عشرات
tenth	عُشر / جزء من عشرة
then	إذن
therefore	إذن
thousandth	جزء من ألف
time	الوقت
times	مضروبًا فى
tin	صفيحة
together	معًا
ton	طن
toothbrush	فرشاة أسنان
top	أعلى
tossing	إلقاء
trapezium	شبه منحرف
triangle	مثلث
truck	شاحنة
try	يحاول

U

units	آحاد / وحدات
usually	عادةً

V

value	قيمة
vertex	رأس
vertices	رءوس
visual	بصرى

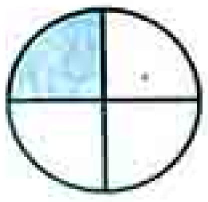
W

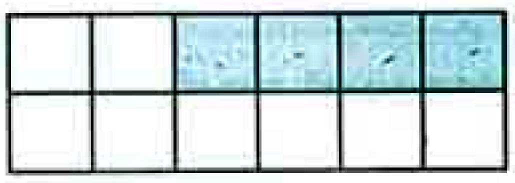
weekend	أجازة أسبوعية
weight	وزن
west	الغرب
whole	صحيح / كامل

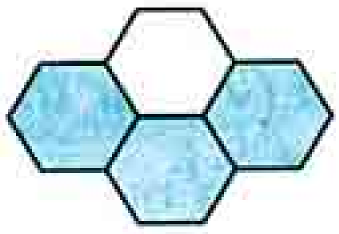
Sheet 1 — On lesson (1) unit (1)

Mark ...... / 25

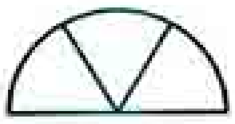
1 [a] ***Write the fraction that represents the shaded part according to the whole figure :*** (..... / 6)

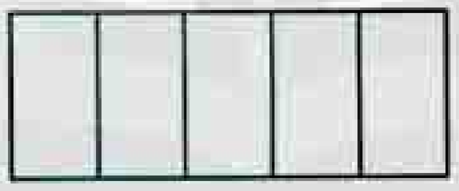
(1)  $\frac{\dots}{\dots}$

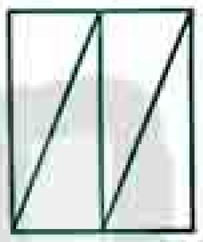
(2)  $\frac{\dots}{\dots}$

(3)  $\frac{\dots}{\dots}$

[b] ***Colour according to the fraction :***

(1)  $\frac{1}{3}$

(2)  $\frac{3}{5}$

(3)  $\frac{3}{4}$

2 ***Complete :*** (..... / 4)

[a] The fraction $\frac{7}{9}$ its numerator is .... and its denominator is ....

[b] Six sevenths = $\frac{\dots}{\dots}$

[c] $1 = \frac{5}{\dots} = \frac{\dots}{4}$

[d] $7 = \frac{\dots}{7}$

[e] The fraction whose numerator is greater than its denominator is called ....

3 ***Choose the correct answer :*** (..... / 5)

[a] The shaded parts represent .... of the figure. ($\frac{1}{2}$ *or* $\frac{2}{3}$ *or* $\frac{1}{4}$)

[b] $\frac{5}{6}$ = ... ($\frac{20}{30}$ *or* $\frac{10}{18}$ *or* $\frac{35}{42}$)

[c] $\frac{10}{45}$ = ... ($\frac{2}{3}$ *or* $\frac{2}{9}$ *or* $\frac{4}{5}$)

[d] $\frac{7}{9}$ .... $\frac{5}{9}$ (> *or* = *or* <)

[e] The denominator of the fraction $\frac{3}{7}$ is .... (3 *or* 7 *or* 10)

4 Find the result :

[a] $\frac{5}{9} + \frac{2}{9} = \frac{\dots\dots}{\dots\dots}$ [b] $\frac{6}{7} - \frac{1}{7} = \frac{\dots\dots}{\dots\dots}$

[c] $\frac{3}{4}$ + one quarter = $\frac{\dots\dots}{\dots\dots}$ = ... [d] $1 - \frac{2}{13} = \frac{\dots\dots}{\dots\dots}$

[e] $\left(\frac{4}{12} + \frac{7}{12}\right) - \frac{9}{12} = \frac{\dots\dots}{\dots\dots}$

$\frac{\dots}{5}$

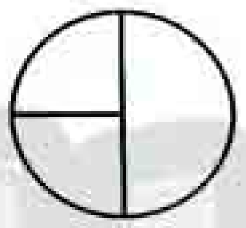
5 Put (✓) for the correct statement and (×) for the incorrect one :

$\frac{\dots}{5}$

[a] The numerator of the fraction $\frac{4}{7}$ is 7 and its denominator is 4 ( )

[b] $\frac{5}{7} + \frac{2}{7} = \frac{3}{3}$ ( )

[c] Three fifths = $\frac{5}{3}$ ( )

[d] The shaded part represents the fraction $\frac{1}{3}$  ( )

[e] $1 - \frac{9}{10} = \frac{8}{9}$ ( )

Sheet 2 From lesson (1) unit (1) to lesson (2) unit (1)

Mark $\frac{\dots\dots}{25}$

1 Complete with "a proper fraction , an improper fraction or a mixed number" :

$\frac{\dots}{5}$

[a] $\frac{5}{4}$ is .... [b] $\frac{3}{8}$ is ....

[c] $2\frac{1}{7}$ is .... [d] $\frac{9}{7}$ is ....

[e] $1\frac{9}{10}$ is ....

2 [a] Write each of the following as an improper fraction :

$\frac{\dots}{4}$

(1) $2\frac{1}{7} = \frac{\dots\dots}{\dots\dots}$ (2) $5\frac{3}{10} = \frac{\dots\dots}{\dots\dots}$

(3) $1\frac{5}{6} = \frac{\dots\dots}{\dots\dots}$ (4) $9\frac{6}{7} = \frac{\dots\dots}{\dots\dots}$

[b] Write each of the following as a mixed number :

(1) $\frac{7}{2}$ = ... $\frac{\dots\dots}{\dots\dots}$ (2) $\frac{15}{4}$ = ... $\frac{\dots\dots}{\dots\dots}$

(3) $\frac{64}{7}$ = ... $\frac{\dots\dots}{\dots\dots}$ (4) $\frac{25}{9}$ = ... $\frac{\dots\dots}{\dots\dots}$

3 ***Put the suitable relation (<) , (=) or (>) :*** $\frac{\dots}{5}$

[a] $\frac{1}{4}$ ☐ $\frac{1}{3}$ [b] $\frac{1}{5}$ ☐ $\frac{1}{7}$

[c] $\frac{2}{5}$ ☐ $\frac{5}{10}$ [d] $2\frac{1}{8}$ ☐ $2\frac{1}{5}$

[e] $3\frac{1}{8}$ ☐ $\frac{25}{8}$

---

4 ***Choose the correct answer :*** $\frac{\dots}{5}$

[a] 19 quarters = ... ($\frac{19}{3}$ *or* $19\frac{1}{4}$ *or* $4\frac{3}{4}$)

[b] $2\frac{1}{3}$ = ... (5 thirds *or* 6 thirds *or* 7 thirds)

[c] $\frac{18}{24} = \frac{\dots}{4}$ (2 *or* 3 *or* 4)

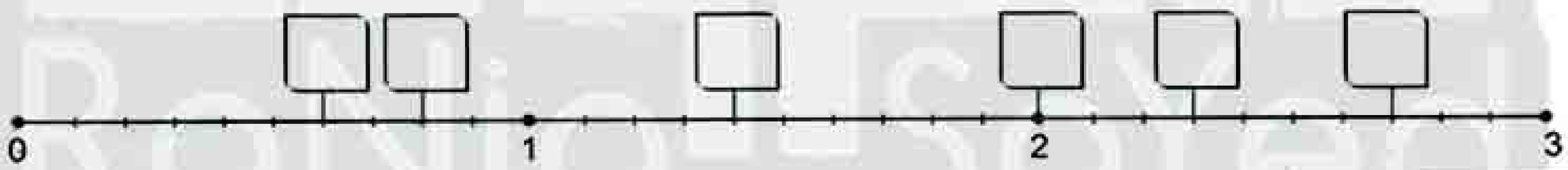
[d] $\frac{2}{3} = \frac{\dots}{33}$ (22 *or* 20 *or* 2)

[e] In the improper fraction , the numerator is .... the denominator.
(greater than *or* less than *or* equal to)

---

5 ***Write each of the following in its suitable place on the number line :*** $\frac{\dots}{6}$

$\frac{6}{10}$, $1\frac{4}{10}$, $2\frac{3}{10}$, $\frac{20}{10}$, $\frac{4}{5}$ and $\frac{27}{10}$



Sheet 3 From lesson (1) unit (1) to lesson (3) unit (1)

Mark $\frac{\dots}{25}$

1 ***Complete the following :*** $\frac{\dots}{5}$

[a] $\frac{1}{2} + \frac{1}{3}$ = ... [b] $\frac{1}{4} - \frac{1}{5}$ = ...

[c] $\frac{2}{3} + \frac{3}{4}$ = ... [d] $\frac{5}{6} - \frac{1}{3}$ = ...

[e] $\frac{1}{2} = \frac{\dots}{18}$

---

2 ***Complete the following :*** $\frac{\dots}{5}$

[a] $3\frac{2}{5} = \frac{\dots}{\dots}$ (improper fraction)

[b] $\frac{16}{24} = \frac{\dots}{\dots}$ (in the simplest form)

[c] $1 - \frac{3}{5} =$ .... [d] $\frac{2}{7} + \frac{3}{7} =$ ....

[e] $\frac{1}{3} + \frac{1}{6} =$ ....

3 Choose the correct answer : (…/5)

[a] $\frac{1}{4} + \frac{2}{3} =$ .... ($\frac{11}{12}$ or $\frac{2}{12}$ or $\frac{3}{12}$ or $\frac{3}{7}$)

[b] $\frac{5}{9} + \frac{1}{3} =$ .... ($\frac{7}{9}$ or $\frac{6}{12}$ or $\frac{8}{9}$ or $\frac{5}{27}$)

[c] $\frac{3}{4}$ ☐ $\frac{5}{9}$ (> or < or =)

[d] $5\frac{1}{2} =$ .... ($\frac{11}{2}$ or 1 or $\frac{21}{5}$ or $\frac{2}{11}$)

[e] $\frac{4}{5} - \frac{1}{20} =$ .... ($\frac{7}{20}$ or $\frac{4}{3}$ or $\frac{3}{4}$ or $1\frac{1}{5}$)

4 Arrange each of the following in an ascending order : (…/6)

[a] $\frac{1}{3}$, $\frac{3}{4}$, $\frac{5}{6}$ and $\frac{7}{12}$ [b] $\frac{1}{2}$, $\frac{5}{8}$, $\frac{7}{10}$ and $\frac{9}{20}$

[c] $\frac{15}{8}$, $1\frac{1}{6}$, $1\frac{11}{12}$ and $\frac{31}{24}$

5 Find the following : (…/4)

[a] $5\frac{1}{2} + 3\frac{1}{5}$ [b] $4\frac{1}{4} + 5\frac{1}{3}$

[c] $6\frac{1}{5} - 1\frac{1}{6}$ [d] $\frac{1}{3} + \frac{1}{2} + \frac{1}{4}$

Sheet 4 From lesson (1) unit (1) to lesson (4) unit (1)

Mark …/25

1 Write : (…/5)

[a] $4\frac{3}{10} =$ .... (using a decimal point)

[b] 23.5 ⟶ .... (in words)

[c] Nine and four tenths ⟶ .... (in digits)

[d] $\frac{9}{8}$ is .... fraction. (complete with : a proper or an improper)

[e] $\frac{13}{2} =$ .... (in a decimal form)

2 Complete each of the following : (…/5)

[a] 389.5 = ... hundreds + ... tens + ... units + ... tenths

[b] 7.2 = ... + 0.2 [c] 0.1 + 0.4 + ... = 1

[d] $\frac{17}{4} =$ .... (as a mixed number) [e] 85.4 = ... (in a fractional form)

3 *Choose the correct answer between brackets :*

..... / 5

[a] $\frac{5}{7}$ = ... ($\frac{10}{14}$ or $\frac{5}{14}$ or $\frac{10}{7}$)

[b] Six hundreds , twenty four and three tenths = ...

(246.3 or 624.3 or 264.3)

[c] 0.4 + 0.4 + ... = 1 (2 or 0.1 or 0.2)

[d] .... = 2 hundreds + 5 units + 7 tenths

(250.7 or 25.7 or 205.7)

[e] If $\frac{18}{27} = \frac{x}{3}$, then x = ... (2 or 3 or 9)

4 *Put (✓) for the correct statement and (×) for the incorrect one :*

..... / 5

[a] Two fifths = $\frac{5}{2}$ ( )

[b] 0.3 + 0.6 = 0.9 ( )

[c] Two hundreds and four tenths = 20.4 ( )

[d] 6.3 = 3 units + 6 tenths ( )

[e] 3.5 = $3\frac{1}{2}$ ( )

5 [a] *Find the result :*

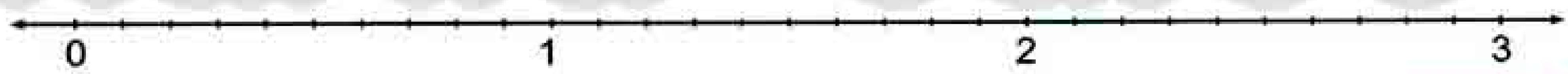
..... / 5

(1) $\frac{5}{6} - \frac{1}{3}$ = ...

(2) $\left(3\frac{1}{4} + 1\frac{1}{3}\right) - \frac{15}{12}$ = ...

[b] *Represent each of the following numbers on the number line :*

0.4 , 1.3 and 2.8



Sheet 5 From lesson (1) unit (1) to lesson (5) unit (1)

Mark ..... / 25

1 *Write :*

..... / 5

[a] $3\frac{47}{100}$ =.......... (as a decimal number)

[b] 7.03 = ... (as a mixed number)

[c] 47.47 = ... (as an improper fraction)

[d] $21\frac{3}{4}$ = ... (in a decimal form)

[e] Twenty two and thirty-five hundredths ⟶ .... (in digits)

❷ Complete : ...../6

[a] 315.728 = ... hundreds + ... ten + ... units

+ ....tenths+ .... hundredths + ... thousandths

[b] 25.961 = ... + 5 + ... + 0.06 + ...

[c] The value of the digit 3 in the number 614.837 is ....

[d] 2.09 .... (in words)

[e] 0.5 + ... = whole one

❸ Choose the correct answer : ...../5

[a] The value of the digit 6 in the number 6.254 is ....

(6 *or* $\frac{6}{10}$ *or* 6 hundredths)

[b] The place value of the digit 7 in the number 604.571 is ....

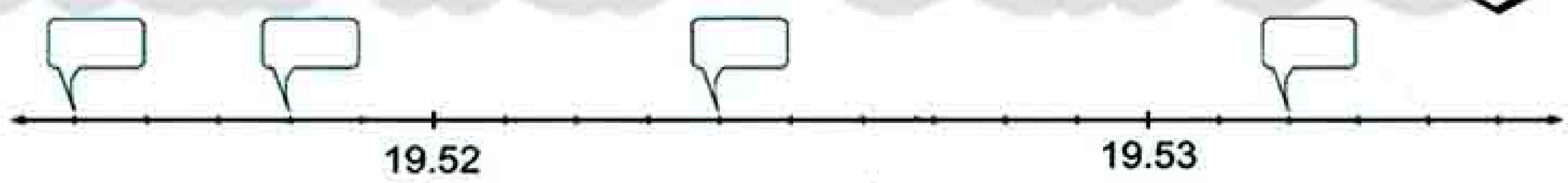
(tens *or* tenths *or* hundredths)

[c] $5\frac{3}{100}$ = ... (5.3 *or* 5.03 *or* 5.5)

[d] $\frac{14}{2\,000}$ = ... (0.007 *or* 0.07 *or* 0.014)

[e] $\frac{6}{7}$ ☐ $\frac{5}{6}$ (> *or* = *or* <)

❹ [a] *Write the suitable number inside each rectangle according to its place on the number line :* ...../4



[b] ***Underline the units digit and circle the tenths digit in each :***

(1) 3.104 **(2)** 64.305

❺ *Find the missing digits :* ...../5

[a] $5.017 = \frac{........}{........}$

[b] $\frac{4}{10} = \frac{........}{100}$

[c] 0.1 + 0.2 + ... = 1

[d] 7 tenths + 4 units = ...

[e] $\frac{3}{5} + \frac{3}{4}$ = ...

Sheet 6 From lesson (1) unit (1) to lesson (6) unit (1)

Mark .... / 25

1 Complete : ..... / 5

[a] 39.471 = 39 + ... + ... + 0.001

[b] 6.541 < .... < 6.543

[c] 9.06 .... 9.5 (using : < , = or >)

[d] 25.25 = ... (as an improper fraction)

[e] $\frac{2}{7}$ + ... = $\frac{6}{7}$

2 Put the suitable relation (<) , (=) or (>) : ..... / 5

[a] 1 ☐ 0.999

[b] $7\frac{1}{2}$ ☐ 7.5

[c] 50.1 ☐ 49.99

[d] 4 hundreds and 4 tenths ☐ 30.04

[e] The value of the digit 3 in the number 0.324 ☐ The value of the digit 5 in the number 0.025

3 Choose the correct answer : ..... / 5

[a] 45 tenths = ... (4.5 or 0.45 or 450)

[b] 0.92 > .... (1.92 or 0.9 or 0.95)

[c] 0.3 + 0.03 = ... (3.3 or 0.033 or 0.33)

[d] $5\frac{1}{8}$ .... 5.125 (< or = or >)

[e] 23.9 = 0.9 + 3 + ... (2 or 20 or 200)

4 [a] Arrange the following numbers in an ascending order : ..... / 4

4.8 , 8.4 , 4.08 and 4.85

The order is : ....

[b] Rearrange the following numbers descendingly :

0.804 , 0.84 , 0.85 and 0.084

The order is : ....

5 **[a] *Use the numbers : 5.3 , 8.3 , 10.03 , 5.13 and 5.313 to complete :***

(..... / 6)

(1) The smallest number is ....

(2) The numbers that are greater than 5.5 are ....

[b] *Write two numbers lying between 3.24 and 3.25*

The two numbers are .... and ....

Sheet 7 From lesson (1) unit (1) to lesson (7) unit (1)

Mark ..... / 25

1 ***Complete :*** (..... / 5)

[a] 1.6 + ... = 8.6

[b] 355 piastres = ... pounds.

[c] (530.64 – 2.371) + (894.7 – 89.58) = ...

[d] 75.02 < ..... < 75.022

[e] $\left(2\frac{2}{3} + \frac{1}{5}\right) - \frac{4}{5}$ = ...

2 ***Put (✓) for the correct statement and (×) for the incorrect one :*** (..... / 5)

[a] 1.07 + 0.7 = 1.77 ( )

[b] $3\frac{1}{8}$ + 7.875 = 10 ( )

[c] 7 thousandths + 3 tenths = 0.037 ( )

[d] $\frac{17}{12}$ is a proper fraction. ( )

[e] The place value of the digit 7 in the number 9876.05 is tenths. ( )

3 ***Choose the correct answer :*** (..... / 5)

[a] 0.04 + 4 + 0.4 = ... (4.08 *or* 4.008 *or* 4.44)

[b] 4.619 – 3.7 = ... (0.999 *or* 0.199 *or* 0.919)

[c] $\frac{1}{8}$ + 4.125 = ... (4.25 *or* 0.45 *or* 0.045)

[d] 7.32 – 1.93 ..... 6.78 – 0.42 (< *or* = *or* >)

[e] 25.9 = 5 + 0.9 + ... (20 *or* 2 *or* 200)

4 Find the result :

[a] 17.43 + 21.35 = ...

[b] 82.06 − 36.095 = ...

[c] 21.5 + 5.42 + 163.384 = ...

[d] 612.5 − 157.125 = ...

(..... / 4)

5 [a] Find the missing digits :

(1) 3 . 2 ☐ + 5 . ☐ 3 = ☐ . 7 9

(2) 8 3 . 5 7 − ☐ ☐ . 7 3 4 = 2 4 . ☐ ☐ ☐

(..... / 6)

[b] If Mona has L.E. 3.95 and Manal has L.E. 6.3
How much money do they have together ?
....

Sheet 8 From lesson (1) unit (1) to lesson (8A) unit (1)

Mark ..... / 25

1 Complete : (..... / 5)

[a] 85 ≃ .... (to the nearest 10)

[b] 4.9 ≃ .... (to the nearest 10)

[c] 3.75 = 3 + ... + 0.05

[d] 218.16 ≃ .... (to the nearest 10)

[e] 9 ≃ .... (to the nearest 10)

2 Choose the correct answer : (..... / 5)

[a] 47 approximated to the nearest 10 is .... (40 *or* 45 *or* 50)

[b] 953.4 approximated to the nearest 10 is .... (950 *or* 960 *or* 955)

[c] 8.56 ≃ .... (to the nearest ten) (10 *or* 9.56 *or* 9)

[d] 9 917 ≃ 9 920 approximated to the nearest .... (100 *or* 1 000 *or* 10)

[e] $5\frac{1}{4}$ .... 5.125 (< *or* = *or* >)

3 Complete using the suitable digits :

..... / 4

[a] ☐ 8 ≃ 70 to the nearest ten.

[b] ☐ 5 ≃ 100 to the nearest ten.

[c] 35 ☐ 7 ≃ 3 ☐ 2 ☐ to the nearest ten.

[d] 6 ☐ 3 ≃ 650 to the nearest ten.

[e] ☐ ☐ 4 ≃ 740 to the nearest ten.

---

4 Find the result of the following approximated the result to the nearest ten :

..... / 5

[a] 93 210 + 21 034 = ... ≃ ....

[b] 1 023.6 – 549.17 = ... ≃ ....

[c] 8 970 ÷ 100 = ... ≃ ....

[d] 5.423 + 9.577 = ... ≃ ....

[e] 3.303 – 0.3 = ... ≃ ....

---

5 [a] Write all the whole numbers which if approximated to the nearest ten , the result will be 200

..... / 6

The numbers are : ....

[b] Ashraf bought a refrigerator for L.E. 1 346.4 and a stove for L.E. 925.8 Calculate what he paid approximating the result to the nearest 10

He paid = ... = L.E. .... ≃ L.E. ....

Sheet 9 From lesson (1) unit (1) to lesson (8B) unit (1)

Mark ..... / 25

1 Complete :

..... / 5

[a] 76 ≃ .... (to the nearest 100)

[b] 475.6 ≃ .... (to the nearest 100)

[c] 6 905 m. = ... km.

[d] 4 375 piastres .... 43.75 pounds. (using : < *or* = *or* >)

[e] 6 327 ≃ .... (to the nearest 1 000)

2 Put the suitable relation (<) , (=) or (>) :

.... / 5

[a] 25.25 ☐ 25 + 0.35

[b] 708.1 approximated to the nearest ten ☐ 7 081 approximated to the nearest hundred.

[c] 6 140 gm. ☐ 6.14 kg.

[d] 4 hundreds and 4 tenths ☐ 400.04

[e] 5.823 ☐ 58.23

3 Choose the correct answer :

.... / 5

[a] $4\frac{7}{10}$ + 3.07 = ... (7.14 or 7.4 or 7.77 or 8.14)

[b] 236 ≃ .... (to the nearest ten)

(230 or 240 or 250 or 260)

[c] 5 470 ÷ 100 = ... (54.7 or 5.47 or 547 or 5 470)

[d] $\frac{2}{5} + \frac{3}{7}$ = ... ($\frac{5}{15}$ or $\frac{29}{35}$ or $\frac{6}{35}$ or $\frac{5}{36}$)

[e] Five and seven tenths = ...

(5.7 or 7.5 or 0.75 or 75)

4 Find the result of each of the following :

.... / 5

[a] 3 524.6 + 243.1 = ... ≃ .... (to the nearest 1 000)

[b] 5 824.6 – 1 123.9 = ... ≃ .... (to the nearest 100)

[c] 30 406 – 17 918 = ... ≃ .... (to the nearest 1 000)

[d] 51.235 = ... ≃ .... (to the nearest hundred)

[e] 5.26 + 7.02 = ... ≃ .... (to the nearest 10)

5 [a] What is the smallest whole number that if approximated to the nearest hundred gives a result of 600 ?

.... / 5

....

[b] A cyclist is riding with speed of 7 300 m. per hour. Find the distance he covers in 3 hours approximating to the nearest 1 000

....

Sheet 10 From lesson (1) unit (1) to lesson (8C) unit (1)

Mark .... / 25

1 Complete : (..... / 5)

[a] 9 356 ≃ .... (to the nearest 10 000)

[b] 507 614 ≃ .... (to the nearest 100 000)

[c] 8 943.52 ≃ .... (to the nearest 10 000)

[d] 61 950 000 .... (to the nearest 100 000)

[e] 7 806 m. ≃ .... km.

2 Choose the correct answer : (..... / 5)

[a] 249 108 ≃ .... (to the nearest 100 000)

(300 000 *or* 200 000 *or* 240 000)

[b] 258 643 ≃ .... (to the nearest 10 000)

(250 000 *or* 260 000 *or* 259 000)

[c] 10 205 ≃ .... (to the nearest 10 000)

(11 000 *or* 10 000 *or* 10 200)

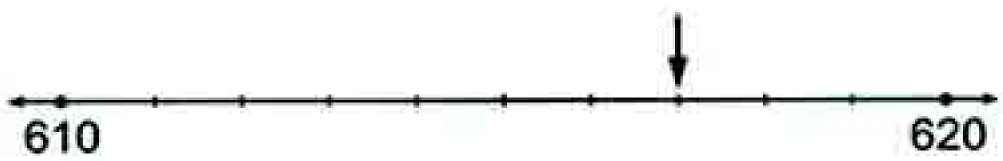
[d] 768 154 ≃ 770 000 approximated to the nearest ....

(1 000 *or* 10 000 *or* 100 000)

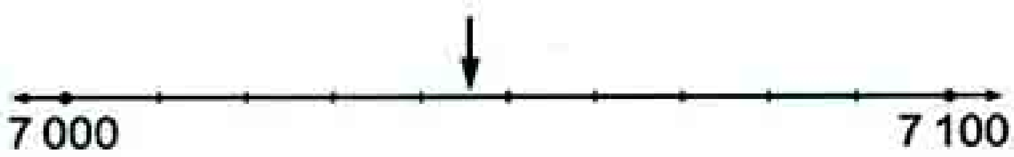
[e] 329 917 ≃ 300 000 approximated to the nearest ....

(1 000 *or* 10 000 *or* 100 000)

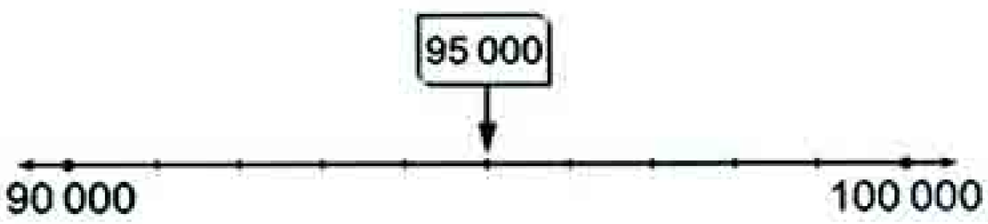
3 Notice the position of each of the following numbers on the number line , then complete : (..... / 5)

[a] 

617 ≃ .... (to the nearest 10)

[b] 

7 048 ≃ .... (to the nearest 100)

[c] 

95 000 ≃ .... (to the nearest 10 000)

4 ***Find the result of each , then approximate :***

$\frac{\dots}{5}$

[a] 86 541 – 5 899 = ... ≃ ....
(to the nearest ten thousand)

[b] 19 935 + 870 506 = ... ≃ ....
(to the nearest hundred thousand)

[c] 12 234.289 – 108.804 = ... ≃ ....
(to the nearest ten thousand)

[d] 57 482.63 + 4 680.372 = ... ≃ ....
(to the nearest hundred thousand)

[e] (1 245.391 + 3 645.871) – 267.981 = ... ≃ ....
(to the nearest thousand)

5 ***Complete :***

$\frac{\dots}{5}$

[a] $4\frac{3}{10}$ = ... (decimal number)

[b] $\frac{\dots}{16} = \frac{3}{4}$

[c] $\frac{3}{8} - \frac{1}{8}$ = ...

[d] 5.7 = 5 + ...

[e] $8 - 3\frac{4}{5}$ = ...

Sheet 11 From lesson (1) unit (1) to lesson (8D) unit (1)

Mark $\frac{\dots}{25}$

1 ***Complete :***

$\frac{\dots}{5}$

[a] 74.45 ≃ .... (to the nearest unit)

[b] 148.7 ≃ .... (to the nearest whole number)

[c] The number 0.37 lying between .... and ....

[d] 16.03 .... (to the nearest unit)

[e] 275.645 ≃ .... (to the nearest 100)

2 ***Choose the correct answer :***

$\frac{\dots}{5}$

[a] 14.6 ≃ .... (to the nearest unit)
(14 *or* 15 *or* 14.5)

[b] 97.75 m. ≃ .... m. (to the nearest metre)
(100 *or* 97 *or* 98)

[c] 135 minutes ≃ .... hours (to the nearest hour)
(1 *or* 2 *or* 3)

[d] 39 months ≃ .... years (to the nearest year)

(2 or 3 or 4)

[e] 2.676 grams ≃ .... kg. (to the nearest kg.)

(2 or 3 or 4)

3 ***Put (✓) for the correct statement and (×) for the incorrect one :*** ..... / 5

[a] 173 cm. ≃ 2 m. (to the nearest metre) (   )

[b] 32 kg. and 450 gm. ≃ 33 kg. (to the nearest kilogram) (   )

[c] $39\frac{3}{5} \simeq 39$ (to the nearest unit) (   )

[d] 0.643 ≃ 1 (to the nearest unit) (   )

[e] 49 ≃ 0 (to the nearest 10) (   )

4 ***Find the result of each :*** ..... / 5

[a] 5.243 + 8.677 = ... ≃ .... (to the nearest 10)

[b] (25.27 + 73.2) – 35.02 = ... ≃ .... (to the nearest unit)

[c] 634.5 – 95.43 = ... ≃ .... (to the nearest hundred)

[d] 364 ÷ 100 = ... ≃ .... (to the nearest unit)

5 ***Complete :*** ..... / 5

[a] 4.7 = 4 + ...

[b] Forty two and three tenths is written as ....

[c] 214 ÷ 1 000 = ...

[d] $\frac{1}{4} + \frac{3}{4} =$ ....

[e] 11.25 + 10.15 = ...

Sheet 12 From lesson (1) unit (1) to lesson (8E) unit (1)

Mark .... / 25

1 ***Complete :*** ..... / 5

[a] 2.39 ≃ .... (to the nearest tenth)

[b] 43.07 ≃ .... (to the nearest ten)

[c] 6.053 ≃ .... (to the nearest $\frac{1}{10}$)

[d] 9 456 ≃ 10 000 (to the nearest ....)

[e] 865 ÷ 100 = ... ≃ .... (to the nearest 0.1)

2 Put (✓) for the correct statement and (×) for the incorrect one : $\frac{.....}{5}$

[a] 45.256 ≃ 45 (to the nearest $\frac{1}{10}$) ( )

[b] 5 968 ≃ 6 000 (to the nearest 1 000) ( )

[c] 187.6 ≃ 280 (to the nearest 100) ( )

[d] 753 cm. ≃ 8 m. (to the nearest metre) ( )

[e] 82.05 ≃ 82.5 (to the nearest 0.1) ( )

---

3 Choose the correct answer : $\frac{.....}{5}$

[a] 100 days ≃ .... weeks (to the nearest week)
(13 *or* 14 *or* 15)

[b] 371.456 ≃ .... (to the nearest 100) (371.5 *or* 370 *or* 400)

[c] The number which if approximated to the nearest tenth and the result will be 0.8 is .... (0.81 *or* 0.86 *or* 1)

[d] 38 000 is the approximation of 37 865 to the nearest ....
(100 *or* 10 000 *or* 1 000)

[e] 59.95 ≃ .... (to the nearest $\frac{1}{10}$) (59.05 *or* 60 *or* 60.9)

---

4 Find the result of each , then approximate : $\frac{.....}{6}$

[a] 14.102 + 8.135 = ... ≃ .... (to the nearest tenth)

[b] 534.460 – 79.864 = ... ≃ .... (to the nearest one decimal)

[c] 3.5 – 1$\frac{3}{4}$ = ... ≃ .... (to the nearest $\frac{1}{10}$)

[d] 134.2 + 28.43 = ... ≃ .... (to the nearest 100)

---

5 [a] Complete using the suitable digits : $\frac{.....}{4}$

(1) 28.0 ☐ ≃ 28.1 (to the nearest $\frac{1}{10}$)

(2) 60. ☐ 5 ≃ 60 (to the nearest unit)

[b] Write the smallest decimal number which consists of 6 , 5 , 1 and 7 , then approximate the result to the nearest tenth.

The number is .... ≃ ....

Sheet 13 From lesson (1) unit (1) to lesson (1) unit (2)

Mark .... / 25

1 Complete : ...... / 6

[a] Two polygons are congruent , if their corresponding sides are .... and their corresponding angles are ....

[b] If the polygon ABCD is congruent to the polygon XYZL , then m (∠ Z) = m (∠ ....)

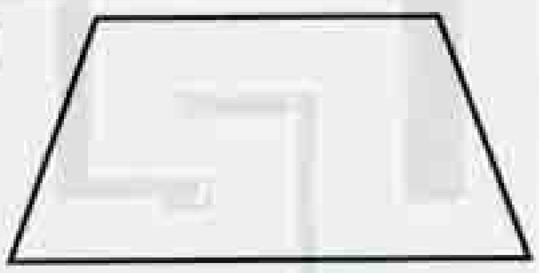
[c] If : Δ KLM ≡ Δ AUC , then $\overline{KL}$ ≡ ....

[d] Two squares are said to be congruent , if the side length of one of them equals .... of the other.

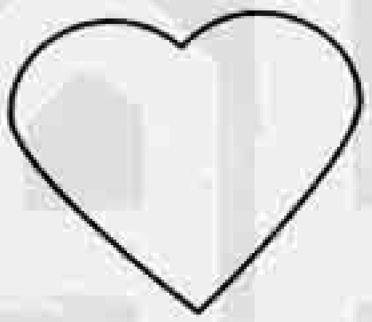
[e] The rectangle ABCD ≡ the rectangle XYZL , then $\overline{BC}$ ≡ ....

2 If possible , draw a line in each figure , to get two congruent figures : ...... / 5

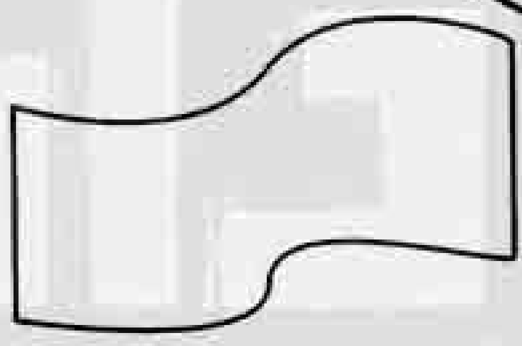
[a]



[b]

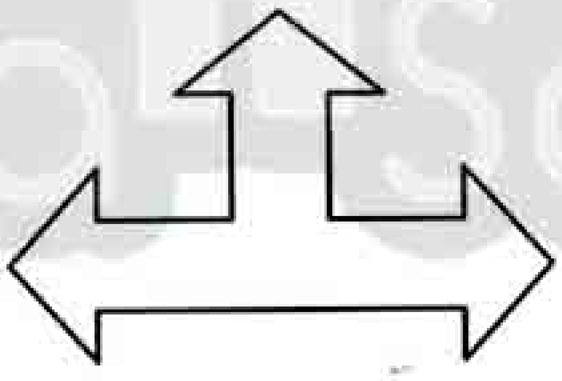


[c]

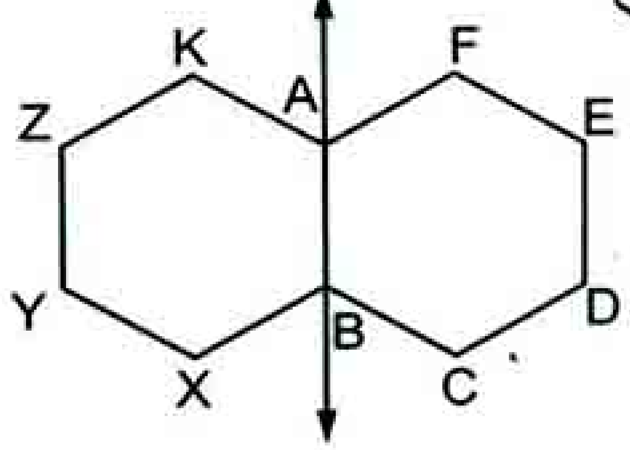


[d]

[e]



3 In the opposite figure , the polygon ABCDEF ≡ the polygon ABXYZK , complete : ...... / 4



[a] $\overline{CD}$ ≡ ....

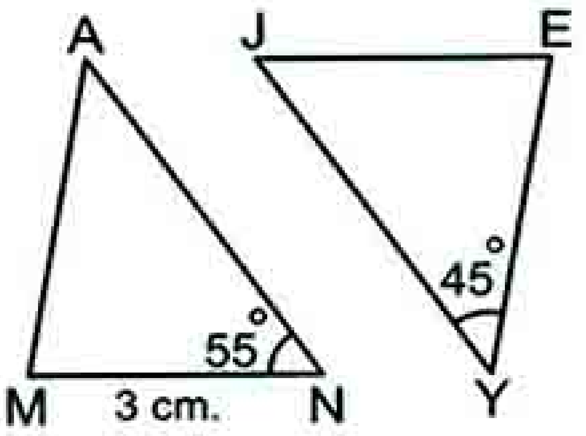
[b] ∠ X ≡ ∠ ....

[c] KA = ...

[d] m (∠ Y) = m (∠ ....)

4 ***In the opposite figure :***

If Δ AMN ≡ Δ YEJ , complete :



[a] $\overline{AM}$ ≡ ....   [b] ∠ E ≡ ∠ ....

[c] EJ = ... = ... cm.

[d] m (∠ Y) = m (∠ ....) = ...°

[e] m (∠ J) = ...°

5

5 ***Choose the correct answer :***

5

[a] $\frac{3}{10}$ + 0.8 = ...   (0.38 ***or*** 3.8 ***or*** 0.11 ***or*** 1.1)

[b] The place value of the digit 4 in the number 8.4 is ....

(units ***or*** tens ***or*** tenth ***or*** hundred)

[c] One hundred , fifty eight and seven tenth , is written ....

(158.7 ***or*** 15.87 ***or*** 1.587 ***or*** 1 587)

[d] 457 $\frac{1}{5}$ ≃ .... (to the nearest whole number)

(457 ***or*** 458 ***or*** 455 ***or*** 659)

[e] 5 $\frac{7}{100}$ = ...   (5.07 ***or*** 5.7 ***or*** 5.007 ***or*** 7.05)

Sheet 14 — From lesson (1) unit (1) to lesson (2) unit (2)

Mark ...... / 25

1 ***Complete :***

5

[a] 1.007 + 9 = ... ≃ .... (to the nearest $\frac{1}{10}$)

[b] 5.42 – 3.362 = ... ≃ .... (to the nearest unit)

[c] The place value of the digit 7 in the number 72.34 is ....

[d] 37.42 + 43.001 + 69.5 = ... ≃ .... (to the nearest 100)

[e] ☐ 78 590 ≃ 300 000 (to the nearest 100 000)

2 ***Choose the correct answer :***

5

[a] The rhombus has .... lines of symmetry.

(2 ***or*** 3 ***or*** 4)

[b] The isosceles triangle has .... lines of symmetry.

(1 ***or*** 2 ***or*** 3)

[c] The parallelogram has .... lines of symmetry.

(0 ***or*** 1 ***or*** 2)

[d] The scalene triangle has .... line(s) of symmetry. **(0 *or* 2 *or* 4)**

[e] The trapezium has .... lines of symmetry. **(1 *or* 4 *or* 0)**

---

3 ***Put (✓) for the correct statement and (×) for the incorrect one :*** $\frac{.....}{5}$

[a] The equilateral triangle has 3 lines of symmetry. ( )

[b] The equality of the corresponding sides of two polygons is not enough to be congruent. ( )

[c] The isosceles trapezium has zero line of symmetry. ( )

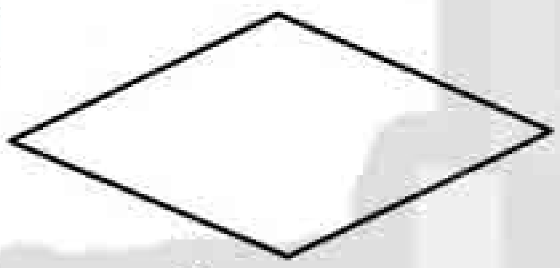
[d] The regular hexagon has 6 lines of symmetry. ( )

[e] The rectangle has 4 lines of symmetry. ( )

---

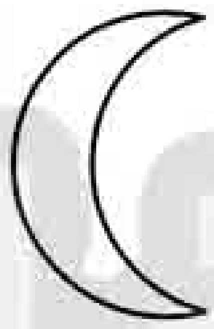
4 ***In each of the following , draw all lines of symmetry (if possible) :*** $\frac{.....}{5}$

[a]

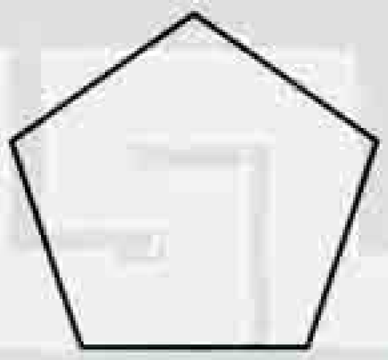


[b]

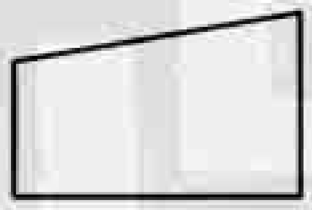
[c]



[d]



[e]



---

5 **[a]** ***Find the result :*** $\frac{.....}{5}$

(1) 95.7 – 62.31 ≃ .... (to the nearest $\frac{1}{10}$)

(2) 24 819 ÷ 1 000 ≃ .... (to the nearest unit)

[b] ***Arrange the following numbers ascendingly :*** 0.45 , 5.4 , 4.5 and 0.54

....

Sheet 15 — From lesson (1) unit (1) to lesson (3) unit (2)

Mark $\frac{..........}{25}$

1 ***Complete :*** $\frac{.....}{5}$

[a] 7.2 = ... (in a mixed form)

[b] 10.321 = 10 + ... + ... + 0.02 + ...

[c] $\frac{1}{8}$ + 0.13 = ... ≃ .... (to the nearest unit)

[d] 1 + 0.973 = ... ≃ .... (to the nearest tenth)

[e] 2 854 m. ≃ .... km. (to the nearest km.)

2 Put (✓) or (✗) :

$\frac{.....}{5}$

[a] 0.49 < 0.5 ( )

[b] The parallelogram has four lines of symmetry. ( )

[c] 20 , 17 , 14 , 11 is pattern of decreasing by 3 ( )

[d] 6 hundredths + 16 tenths = 6.22 ( )

[e] 0.4 = 0.7 – 0.30 ( )

---

3 Choose the correct answer :

$\frac{.....}{5}$

[a] In the rectangle ABCD , $\overline{AB}$ // .... ($\overline{BC}$ or $\overline{DC}$ or $\overline{BD}$)

[b] The value of the digit 6 in the number 18.36 is ....

(6 or 60 or 0.06 or 600)

[c] BAC CAB BAC .... (BAC or ABC or CAB)

[d] 1 , 3 , 9 , 27 , ... (36 or 81 or 30)

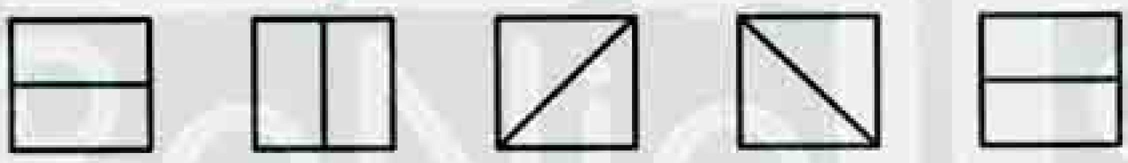
[e] The number of lines of symmetry of the square ☐ the number of lines of symmetry of the rhombus. (> or = or <)

---

4 Discover the rule and find the next one :

$\frac{.....}{5}$

[a] ....

[b]  ....

[c] ....

[d] A , Z , B , Y , C , X , ... , ...

---

5 Choose the correct answer :

$\frac{.....}{5}$

[a] $\frac{3}{4}$ = ... (0.75 or 0.8 or 0.0755 or 0.25)

[b] The number $\frac{18}{4}$ = ... ($4\frac{1}{2}$ or $4\frac{2}{3}$ or $4\frac{3}{5}$ or $4\frac{2}{5}$)

[c] The digit of tenths in the number 23.69 is ....

(9 or 6 or 3 or 2)

[d] 9 085 ≃ 9 000 to the nearest ....

(10 or 100 or 1 000 or 10 000)

[e] 11.25 + 10.15 = ... (21.25 or 22.15 or 21.40)

Sheet 16 From lesson (1) unit (1) to lesson (1) unit (3)

Mark ..... / 25

1 *Complete :* ..... / 6

[a] 4 000 mL = ... litres

[b] 6 litres = ... millilitres

[c] 2 dm.^{3} = ... mL

[d] $7\frac{3}{4}$ litres = ... millilitres

[e] 3.04 + 2.201 = ... ≃ .... (to the nearest unit)

2 *Put the suitable relation (<) or (=) or (>) :* ..... / 5

[a] 1 litre ☐ 1 dm.^{3}

[b] 4 000 mL ☐ 40 litres

[c] $\frac{1}{4}$ litre ☐ 245 millilitres

[d] 5 dm.^{3} ☐ 245 millilitres

[e] 1 750 mL ☐ $2\frac{3}{4}$ litres

3 *Choose the correct answer :* ..... / 5

[a] The capacity of gasoline tank in a car is ....
(5 mL *or* 200 litres *or* 50 litres)

[b] The capacity of water in a waching machine is ....
(1 000 cm.^{3} *or* 20 L *or* 200 mL)

[c] I drink about .... of water daily. (2 L *or* 50 mL *or* $\frac{1}{2}$ L)

[d] The capacity of juice in a family size bottle is ....
(10 L *or* 100 mL *or* 2 dm.^{3})

[e] The capacity of a bottle of medicine is ....
($\frac{1}{8}$ L *or* 1 dm.^{3} *or* 1 cm.^{3})

4 [a] *Arrange the following quantities in an ascending order :* ..... / 4

250 mL , 1 L , $1\frac{1}{4}$ dm.^{3} and $\frac{3}{4}$ L

The order is : ....

[b] *Arrange the following quantities in a descending order :*

2 000 mL , 20 L , $2\frac{3}{4}$ dm.^{3} and 3 000 cm.^{3}

The order is : ....

5 Choose the correct answer : $\frac{.....}{5}$

[a] The equilateral triangle has .... lines of symmetry. (2 or 1 or 3 or 4)

[b] $\frac{2}{5} + \frac{3}{7} =$ .... ($\frac{5}{12}$ or $\frac{24}{35}$ or $\frac{6}{35}$ or $\frac{6}{7}$)

[c] 49.57 ÷ 10 = ... (4.957 or 47.49 or 495.7 or 4975)

[d] 530 , 533 , 536 this pattern is increasing by .... (3 or 4 or 5 or 543)

[e] The value of the digit 4 in the number 0.41 is .... (0.04 or 0.4 or 40)

Sheet 17 From lesson (1) unit (1) to lesson (2) unit (3)

Mark $\frac{.....}{25}$

1 Complete : $\frac{.....}{6}$

[a] $6\frac{1}{4}$ litres = ... mL

[b] $3\frac{1}{2}$ kg. + 250 gm. = ... kg.

[c] $\frac{1}{4}$ ton = ... kg.

[d] .... kg. = $2\frac{1}{4}$ kg. + 750 gm.

[e] 2 403.5 – 79.08 = ... ≃ .... (to the nearest 1 000)

2 Choose the suitable weight for : $\frac{.....}{5}$

[a] An elephant .... (grams or kilograms or tons)

[b] A ring .... (grams or kilograms or tons)

[c] A goat .... (grams or kilograms or tons)

[d] A refrigerator .... (150 grams or 150 kilograms or 150 tons)

[e] An iron .... (3 gm. or 2 kg. or $\frac{1}{2}$ ton)

3 Put the suitable relation (<) or (=) or (>) : $\frac{.....}{5}$

[a] 8.4 ☐ 8.04

[b] $\frac{1}{4}$ litre + $\frac{3}{4}$ dm.^{3} ☐ 1 000 mL

[c] $5\frac{3}{4}$ kg. ☐ 5 tons

[d] 6 250 gm. + $\frac{3}{4}$ kg. ☐ 7 tons

[e] 43 102 gm. ☐ 1 ton

4 [a] *Arrange the following quantities in a descending order :* $\frac{.....}{4}$

$\frac{1}{2}$ ton , 800 000 gm. , 7 000 kg. and 789 kg.

The order is : ....

[b] ***Arrange the following quantities in an ascending order :***

49 570 gm. , 47 kg. , 7 tons and 4 750 gm.

The order is : ....

5 ***Complete :***

(..... / 5)

[a] $\frac{9}{5}$ = ... (in a decimal form)

[b] 4 + 5.36 + 6.12 ≃ .... (to the nearest $\frac{1}{10}$)

[c] 204.9 – 23.85 ≃ .... (to the nearest unit)

[d] 6 ☐ 74 ≃ ☐ 300 (to the nearest 100)

[e] $\frac{45}{55}$ = $\frac{.........}{.........}$

Sheet 18 From lesson (1) unit (1) to lesson (3) unit (3)

Mark .... / 25

1 ***Complete :***

(..... / 6)

[a] 7 tons = ... grams

[b] 6 000 mL = ... litres

[c] 3.75 + 1 $\frac{1}{4}$ = ... ≃ .... (to the nearest 10)

[d] 2 hours and 30 minutes = ... minutes.

[e] 1 $\frac{1}{2}$ days = ... hours

2 ***Put the suitable relation (<) , (=) or (>) :***

(..... / 5)

[a] 750 gm. ☐ $\frac{1}{2}$ kg.

[b] $\frac{3}{4}$ hour ☐ 40 minutes

[c] 1 $\frac{1}{4}$ days ☐ 1 800 minutes

[d] 84 hours ☐ 4 days

[e] 45 days ☐ 7 weeks

3 ***Choose the suitable time for :***

(..... / 5)

[a] Reading a short story ....

(30 seconds ***or*** 30 minutes ***or*** 30 hours)

[b] Burshing your teeth ....

(3 seconds ***or*** 3 minutes ***or*** 30 minutes)

[c] A person sleeps daily about ....

(8 seconds ***or*** 8 minutes ***or*** 8 hours)

[d] Drinking a cup of coffee ....

(5 seconds **or** 5 minutes **or** 1 hour)

[e] Watching a football match ....

(90 minutes **or** 180 minutes **or** 4 hours)

4 [a] ***Arrange each of the following in an ascending order :*** $\frac{.....}{4}$

1 week , $\frac{2}{3}$ a day , 3 600 seconds and 24 minutes

The order is : ....

[b] ***Arrange each of the following in a descending order :***

$\frac{1}{3}$ day , 3 600 seconds , 44 minutes and 1 week

The order is : ....

5 The TV series started at 7:30 PM and took 45 minutes. $\frac{.....}{5}$

What time did it finish ?

....

Sheet 19 From lesson (1) unit (1) to lesson (1) unit (4)

Mark $\frac{..........}{25}$

1 ***Complete :*** $\frac{.....}{7}$

[a] millilitre = ... litre

[b] 20.30 – 2.03 ≃ .... (to the nearest $\frac{1}{10}$)

[c] $2\frac{1}{4}$ days = ... hours

[d] 10 , 9.6 , 9.2 , ... (in the same pattern)

[e] Data are collected by using : .... , ... and ....

2 ***Choose the suitable answer :*** $\frac{.....}{5}$

[a] The square has .... lines of symmetry. (zero **or** 2 **or** 4)

[b] 2.5 < .... < 3 (2.1 **or** 2.8 **or** 3.01)

[c] 6 020 gm. = 6 kg. + ... gm. (20 **or** 2 000 **or** 200)

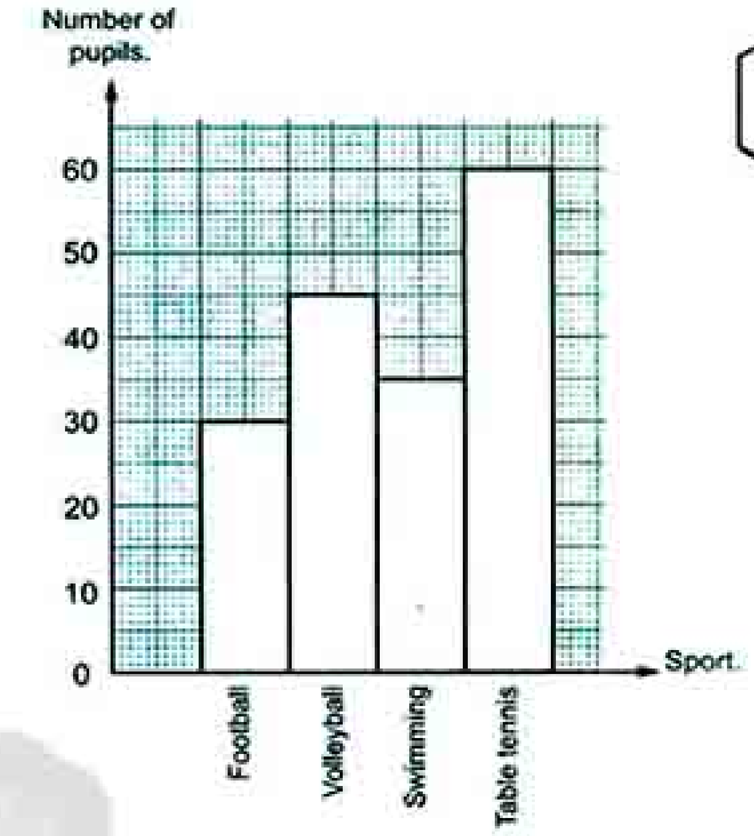
[d] $8\frac{4}{5}$ = ... (8.4 **or** 8.8 **or** 8.5 **or** 5.4)

[e] 3 254.6 – 1 357.94 ≃ ....(to the nearest 10)

(1 896.7 **or** 1 897 **or** 1 900)

3 *Use the opposite histogram , complete the following table :*

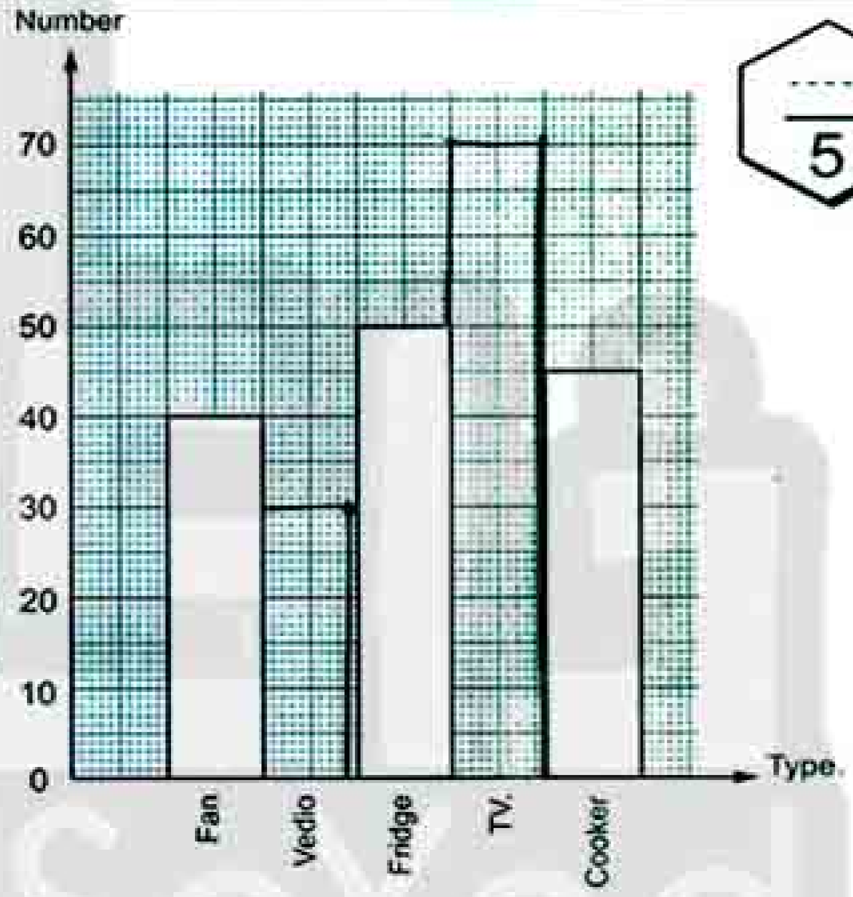
Sport	Football	Volleyball	Swimming	Table tennis
Number of pupils	....	....	....	....



4

4 *The following table and the opposite histogram represent the weekly production of a factory , complete the table and the graph :*

Type	Fan	Vedio	Fridge	TV	Cooker
Number	....	30	....	70	....

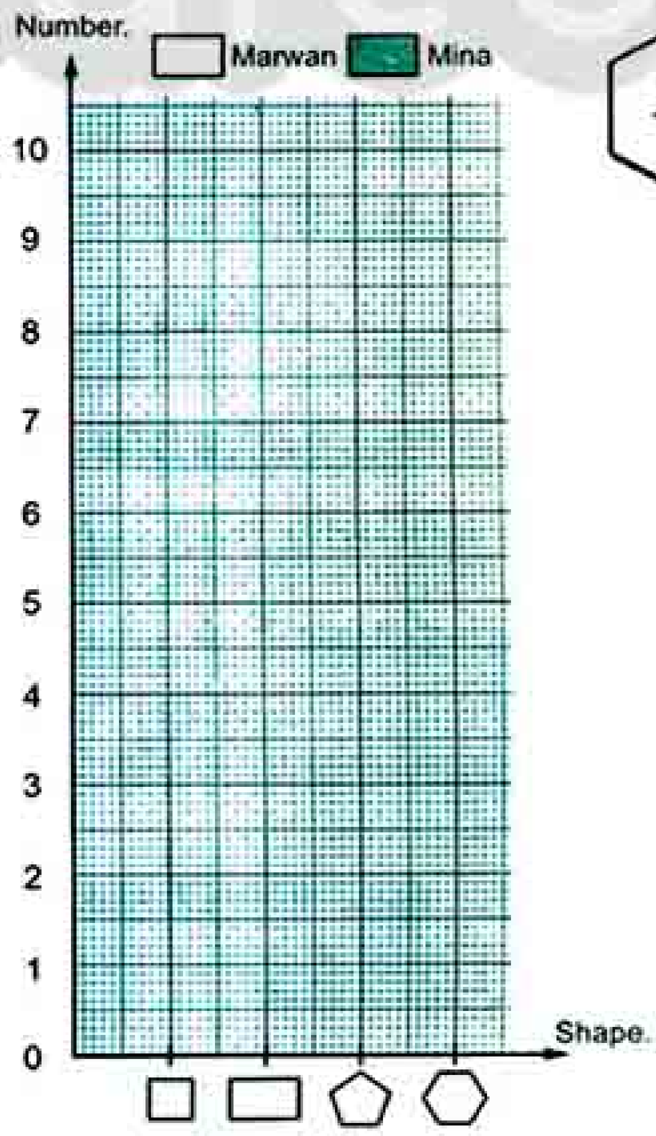


5

5 *Marwan and Mina are classifying the shapes drawn in their math. books and they found that :*

Shape	□ (square)	▭ (rectangle)	⬠ (pentagon)	⬡ (hexagon)
Marwan	𝍸 III	𝍸 II	𝍸 IIII	𝍸 I
Mina	𝍸 II	𝍸 𝍸	𝍸 IIII	𝍸 III

Complete representing by the double bars.



4

Sheet 20 From lesson (1) unit (1) to lesson (2) unit (4)

Mark .... / 25

1 *Complete :* (..... / 5)

[a] The place value of the digit 4 in the number 34 598.2 is ....

[b] 7 500 mL = ... litres.

[c] $5\frac{1}{2}$ kg. + 250 gm. = ... kg.

[d] The probability of the certain event is ....

[e] The probability of appearance of head when tossing a coin once = ...

2 *Choose the correct answer :* (..... / 5)

[a] The probability of the impossible event = ... (0 **or** 1 **or** $\frac{1}{2}$)

[b] When you throw a dice once , the probability of getting the number 5 is .... ($\frac{1}{6}$ **or** $\frac{5}{6}$ **or** 1)

[c] The probability of the certain event ☐ the probability of the impossible event. (> **or** = **or** <)

[d] A teacher chooses a student at random from a class of 35 boys. What is the probability that the student chosen is a boy ? .... ($\frac{1}{35}$ **or** $\frac{1}{34}$ **or** 1)

[e] If the distance between two villages is 4 800 metres , this approximately equals .... km. (5 **or** 5 000 **or** 4)

3 *In an experiment of tossing a single die once and observing the number on the upper face , complete :* (..... / 6)

[a] The probability of getting an even number is ....

[b] The probability of getting an odd number is ....

[c] The probability of getting a prime number is ....

[d] The probability of getting a number divisible by 2 is ....

4 ***A glass jar contains 7 red , 4 green , 3 blue and 6 yellow marbles.***
If a single marble is chosen at random from the jar.
What is the probability of choosing :

$\frac{\dots}{6}$

[a] a red marble ? ....

[b] a green marble ? ....

[c] a non-yellow marble ? ....

---

5 Ahmed has 32.85 pounds and his sister Engi has 15.15 pounds.
Find the difference between what they have to the nearest pound.

$\frac{\dots}{3}$

....

Summary of Unit One

Fractions

Proper fraction

A proper fraction is just a fraction where its numerator is **less than** its denominator.

numerator < denominator

For Example :

$\frac{1}{5}, \frac{2}{7}, \frac{5}{8}, \dots$

Improper fraction

An improper fraction is just a fraction where its numerator is **greater than** or **equal to** its denominator.

numerator ≥ denominator

For Example :

$\frac{7}{5}, \frac{8}{3}, \frac{9}{9}, \frac{6}{2}, \dots$

Mixed numbers

A mixed number is a number consisting of a **whole number** and **a proper fraction.**

For example :

$3\frac{1}{4}, 9\frac{2}{7}, 1\frac{3}{5}, \dots$

Converting a mixed number to an improper fraction

To convert a mixed number as $5\frac{2}{3}$ to an improper fraction , do the following steps :

STEP 1

Multiply the denominator 3 by the whole number 5

$3 \times 5 = 15$

STEP 2

Add the result to the numerator 2

$15 + 2 = 17$

STEP 3

Write the result on top of the denominator, then :

$5\frac{2}{3} = \frac{17}{3}$

Summary

Converting an improper fraction to a mixed number

To convert an improper fraction as $\frac{23}{6}$ to a mixed number, do the following steps :

STEP 1

Divide the numerator 23 by the denominator 6

STEP 2

Put the quotient 3 as the whole number.

STEP 3

Put the remainder 5 over the denominator 6

Quotient: 3

$6 \overline{)23}$, -18, remainder 5

Remainder: 5

$\frac{23}{6} = 3\frac{?}{?}$

$\frac{23}{6} = 3\frac{5}{6}$

Remember that

You should simplify the improper fraction at first, then convert it to the mixed number to be your result in the simplest form.

For Example : To convert $\frac{48}{20}$ to a mixed number :

- Simplify $\frac{48}{20}$ as follows : $\frac{48}{20} = \frac{48 \div 4}{20 \div 4} = \frac{12}{5}$
- Convert $\frac{12}{5}$ to a mixed number as we studied before : $\frac{12}{5} = 2\frac{2}{5}$

Summary

Comparing any two fractions of different numerators and denominators

To compare two fractions of different numerators and denominators as $\frac{3}{4}$ and $\frac{5}{6}$, follow the following steps :

STEP 1

Find the L.C.M. of 4 and 6

$4 = 2 \times 2$

$6 = 2 \times 3$

L.C.M. $= 2 \times 2 \times 3 = 12$

STEP 2

Express the two fractions by two other equal fractions with denominator 12

$\frac{3}{4} = \frac{3 \times 3}{4 \times 3} = \frac{9}{12}$

$\frac{5}{6} = \frac{5 \times 2}{6 \times 2} = \frac{10}{12}$

STEP 3

Compare the two new fractions, then :

$\frac{9}{12} < \frac{10}{12}$

So, $\frac{3}{4} < \frac{5}{6}$

Adding and subtracting fractions with different denominators

To add or subtract fractions with different denominators , do as follows :

1. Find the L.C.M. of the denominators.
2. Change the fractions to equal fractions with common denominators.
3. Add or subtract the new fractions.

For Example :

1. $\frac{1}{4} + \frac{2}{7} = \frac{7}{28} + \frac{8}{28}$ (L.C.M. of 4 and 7 is 28) $= \frac{15}{28}$
2. $\frac{5}{6} - \frac{3}{4} = \frac{10}{12} - \frac{9}{12}$ (L.C.M. of 6 and 4 is 12) $= \frac{1}{12}$

Decimal numbers

Any fraction of a denominator 10 , 100 or 1000

can be written as a decimal number as in the following examples :

$\frac{4}{10} = 0.4$	$\frac{374}{100} = 3.74$	$1\frac{23}{1000} = 1.023$
"the decimal point is after 1 digit from the right"	"the decimal point is after 2 digits from the right"	"the decimal point is after 3 digits from the right"

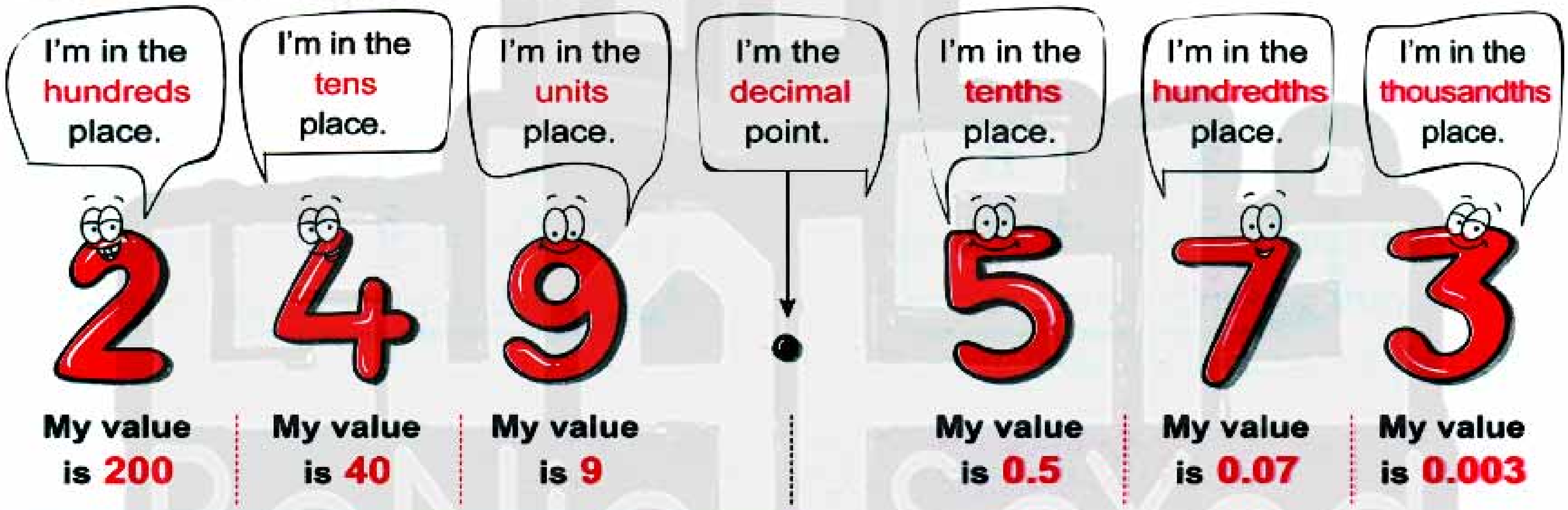
Converting fractions or mixed numbers to decimals

- To convert a fraction or a mixed number to a decimal , we try to make the denominator equal to 10 or 100 or 1000 or ... etc.
- We can do that by multiplying or dividing both , the denominator and the numerator , by the same number.

For Example :

- $\frac{3}{5} = \frac{3 \times 2}{5 \times 2} = \frac{6}{10} = 0.6$
- $\frac{23}{20} = \frac{23 \times 5}{20 \times 5} = \frac{115}{100} = 1.15$
- $5\frac{32}{800} = 5\frac{32 \div 8}{800 \div 8} = 5\frac{4}{100} = 5.04$

The place value of decimals



Comparing two decimal numbers

To compare two decimal numbers as 2.135 and 2.137 , follow the following steps :

STEP 1	STEP 2	STEP 3	STEP 4
Compare the **units**.	Compare the **tenths**.	Compare the **hundredths**.	Compare the **thousandths**.
2.135 ↓ 2.137	2.135 ↓ 2.137	2.135 ↓ 2.137	2.135 ↓ 2.137
the same number of **units**	the same number of **tenths**	the same number of **hundredths**	5 < 7

So , 2.135 < 2.137

Summary

Adding and subtracting decimal numbers

Follow the following steps to add (or subtract) decimal numbers :

1. Put the decimal points under each other.
2. Put zeroes to the right of the last decimal digit so that each number has the same number of digits after the decimal point.
3. Add or subtract by starting from the right to the left.

For Example :

$$3.13 + 5.49$$

$$\begin{array}{r} 3.13 \\ +\ 5.49 \\ \hline 8.62 \end{array}$$

$$8.6 - 6.51$$

$$\begin{array}{r} 8.60 \\ -\ 6.51 \\ \hline 2.09 \end{array}$$

Dividing a whole number by 10 , 100 and 1000

When we divide a whole number by 10 , 100 or 1000 , we put a decimal point after 1 digit , 2 digits or 3 digits from the right respectively , as in the following examples :

574 ÷ 10 = 57.4	238 ÷ 100 = 2.38	9853 ÷ 1000 = 9.853

Summary

Approximating to the nearest ten, hundred, thousand, ten thousand or hundred thousand

To approximate to the nearest ten , hundred , thousand , ten thousand or hundred thousand , do as follows :

1. Underline the digit written at the place that you want to approximate to.
2. Look at the digit written at the place which is on the right of the underlined digit.

IF

This digit is

Less than 5

- Replace it and every digit to the right of it by 0
- Keep the other digits as they are.
- Remove the decimal part if it exists.

Equal to 5 or more

- Replace it and every digit to the right of it by 0
- Add one to the underlined digit.
- Keep the other digits as they are.
- Remove the decimal part if it exists.

For Example :

- 7468<u>5</u>2 (2 < 5) ≃ 746850 "to the nearest ten".
- 746<u>8</u>52 (= 5) ≃ 746900 "to the nearest hundred".
- 74<u>6</u>852 (8 > 5) ≃ 747000 "to the nearest thousand".
- 7<u>4</u>6852 (6 > 5) ≃ 750000 "to the nearest ten thousand".
- <u>7</u>46852 (4 < 5) ≃ 700000 "to the nearest hundred thousand".

Summary

Approximating to the nearest unit

To approximate to the nearest unit , do as follows :

Look at the digit written at the tenth's place.

IF

This digit is

Less than 5

- Cancel the decimal part.

For Example :

$4 < 5$

- $12.41 \simeq 12$

Equal to 5 or more

- Cancel the decimal part and add 1 to the units digit.

For Example :

$6 > 5$

- $428.6 \simeq 429$

Approximating to the nearest tenth

To approximate to the nearest tenth (0.1 or $\frac{1}{10}$) , do as follows :

Look at the digit written at the hundredth's place.

IF

This digit is

Less than 5

- Leave out the digit at the hundredth's place and the other digits to the right.

For Example :

$2 < 5$

- $6.42 \simeq 6.4$

Equal to 5 or more

- Increase the digit at the tenth's place by one, and leave out other digits to the right.

For Example :

$6 > 5$

- $123.76 \simeq 123.8$

Summary of Unit Two

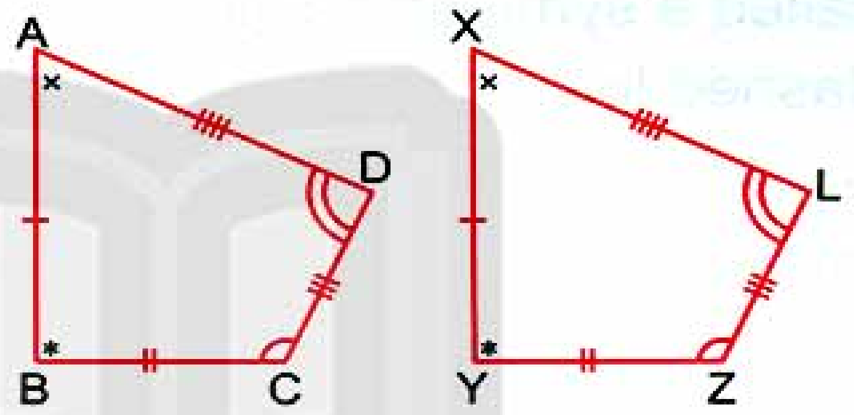
Congruency

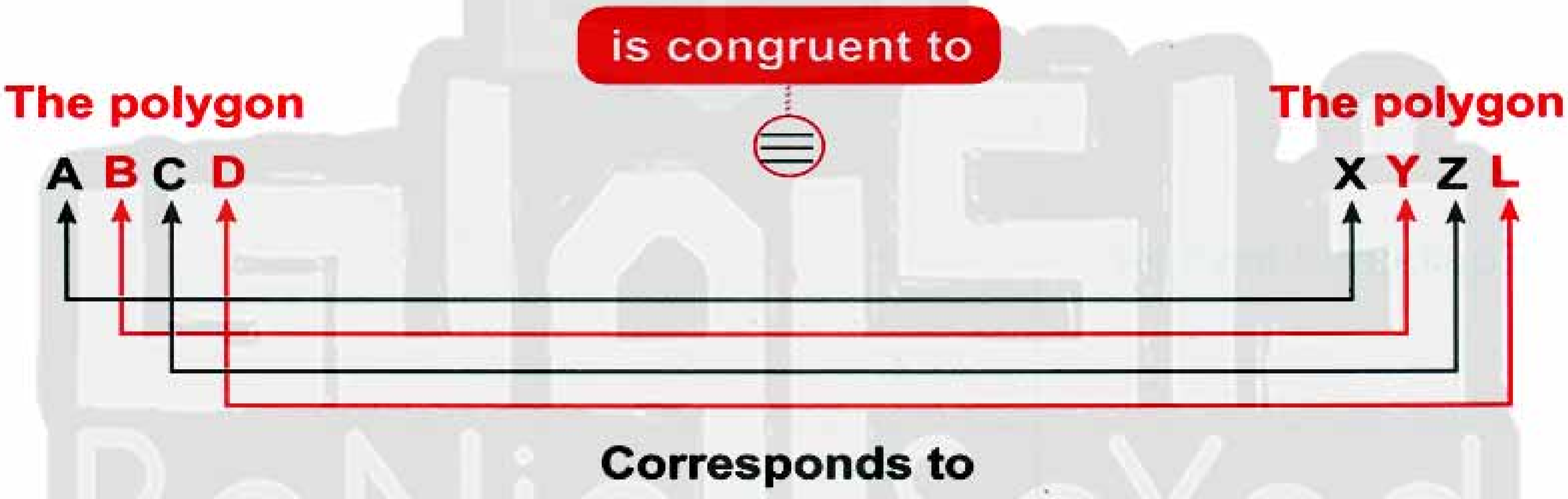
Two polygons are congruent if :

1. Their corresponding sides are equal in length.
2. Their corresponding angles are equal in measure.

For Example :

In the opposite figure :





, then :

1. AB = XY , BC = YZ , CD = ZL and DA = LX
2. m (∠ A) = m (∠ X) , m (∠ B) = m (∠ Y) , m (∠ C) = m (∠ Z) and m (∠ D) = m (∠ L)

Special cases

1. Two squares are congruent if the side length of one of them equals the side length of the other.
2. Two rectangles are congruent if the two dimensions of one of them equal the two dimensions of the other.
3. Equality of corresponding sides of two triangle , is enough to be congruent triangles.

Summary

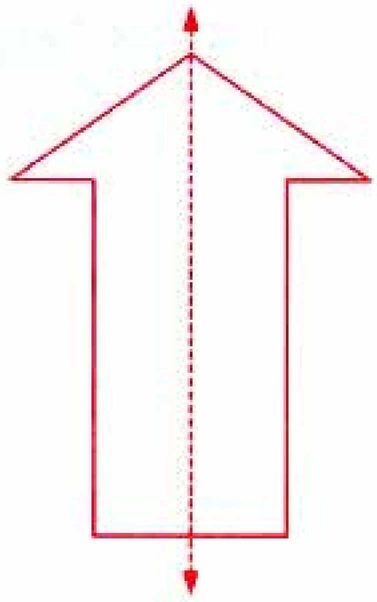
Symmetrical figures and lines of symmetry

We say that a figure has line of symmetry if it can be folded into two congruent parts that match exactly.

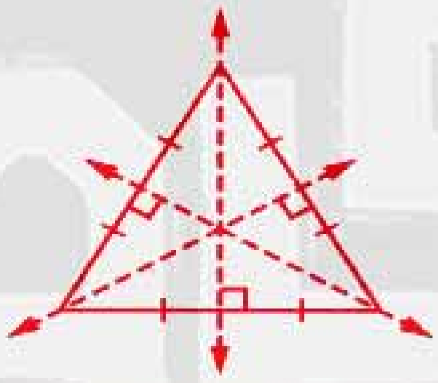
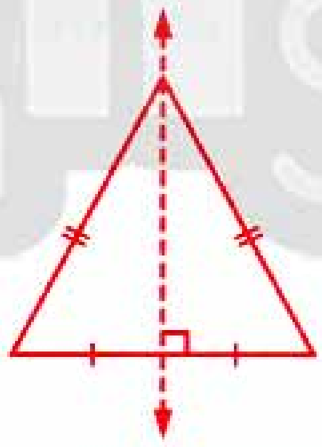
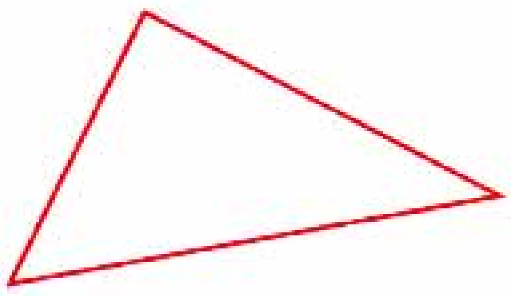
For Example :

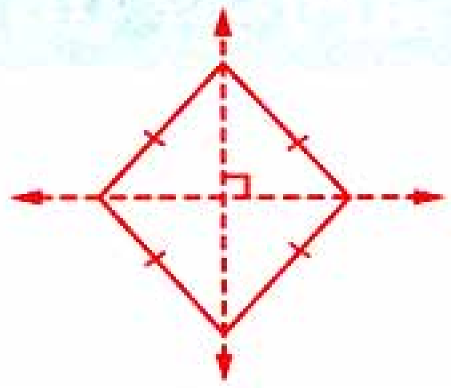
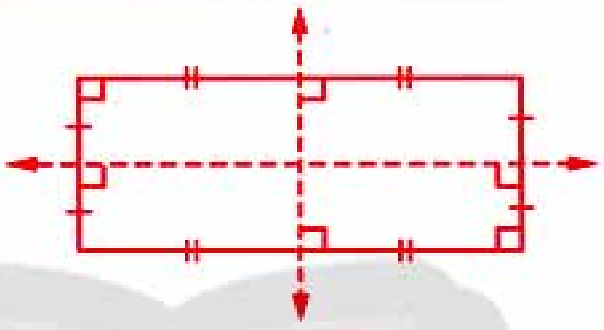
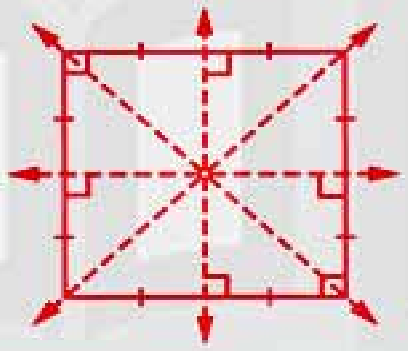
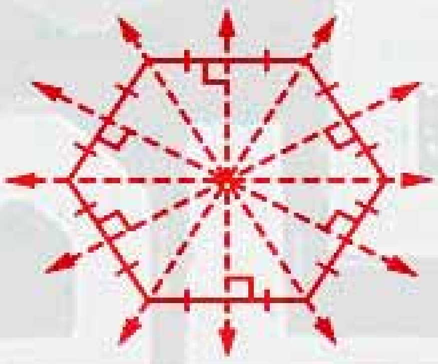
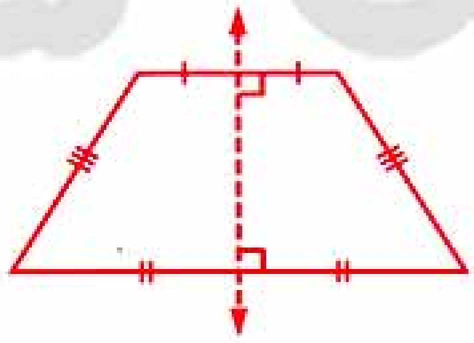
In the oppsite figure :

The dashed line is called a line of symmetry and the figure is called a symmetrical figure in relation to the dashed line and the two parts of the figure are congruent.



The following table shows the number of lines of symmetry for some geometrical figures :

The figure name	The figure	Number of axes of symmetry
Equilateral triangle		3
Isosceles triangle		1
Scalene triangle		0
Parallelogram		0

Rhombus		2
Rectangle		2
Square		4
Regular hexagon		6
Trapezium		0
Isosceles trapezium		1

Visual patterns

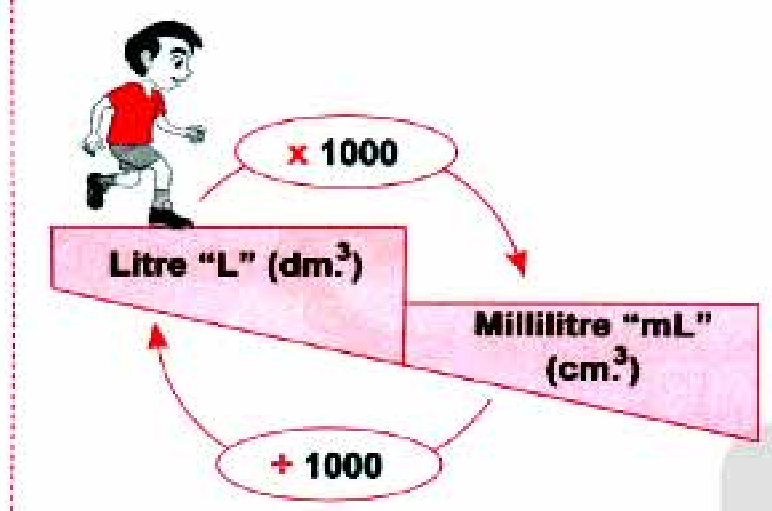
A pattern is a sequence of numbers , symbols or figures arranged according to a certain system or rule.

For Example :

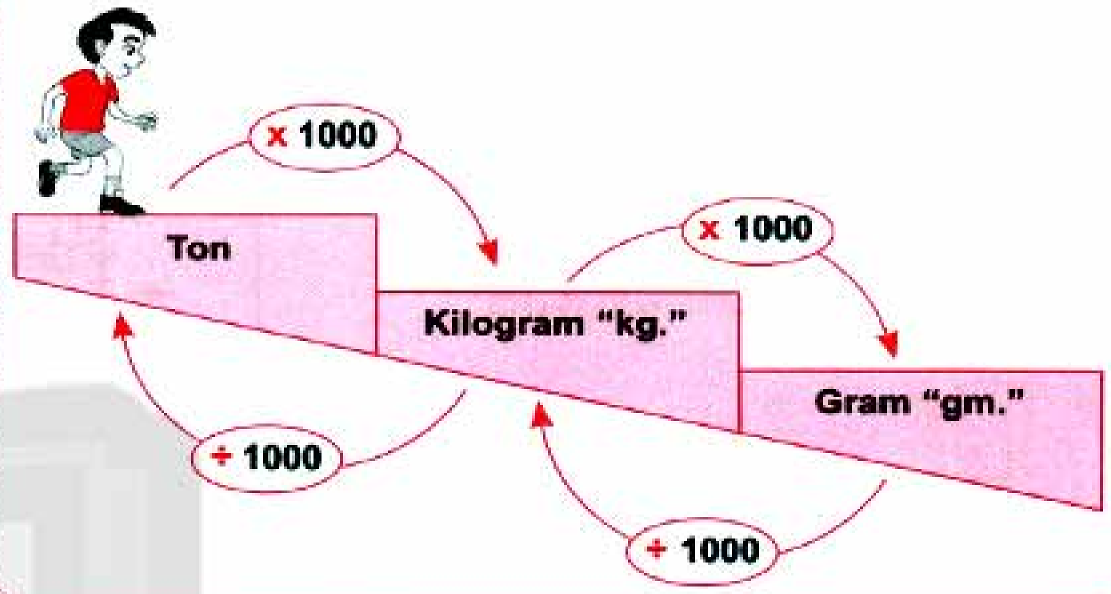
- 0 , 2 , 4 , 6 , 8 , ...
- △○○, △○○, △○○, △○○, ...

Summary of Unit Three

Units of capacity

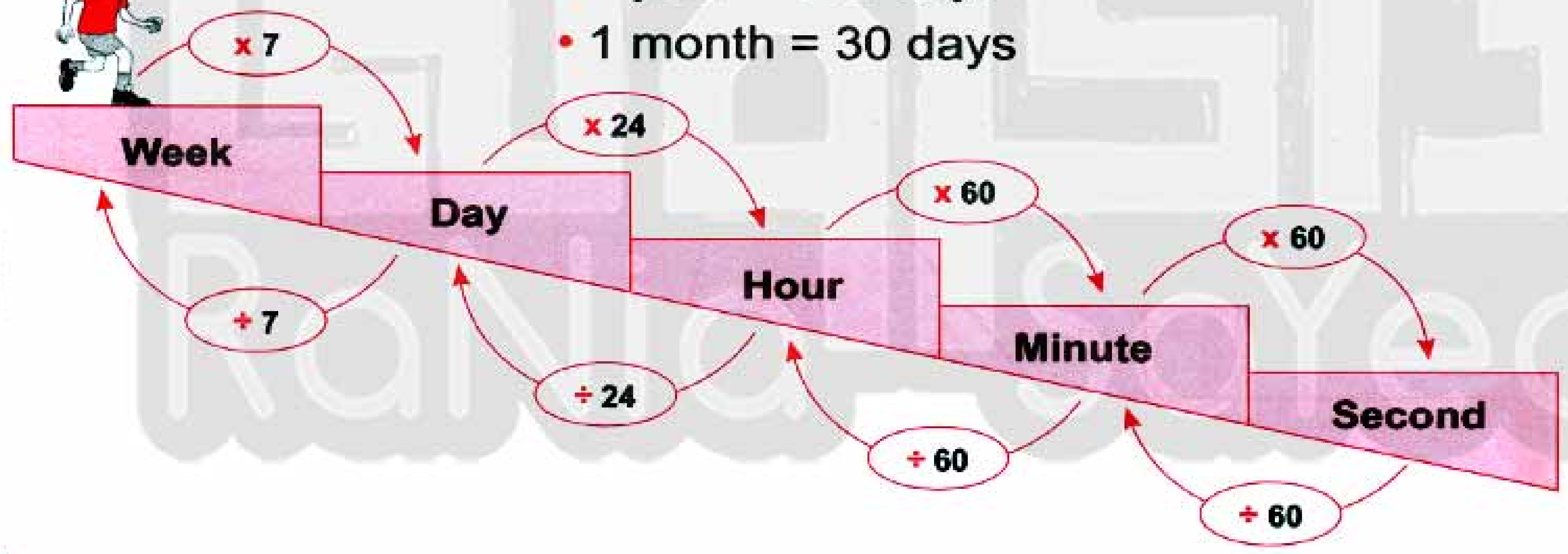


Units of weight



Units of time

- 1 year = 12 months
- 1 year = 365 days
- 1 month = 30 days



Remarks

1. To convert a **larger** unit to a **smaller** unit , you have to **multiply**.
2. To convert a **smaller** unit to a **larger** unit , you have to **divide**.

Summary of Unit Four

Collecting data

Data are collected using methods like :

1. noticing.
2. experimenting.
3. field (practical) studies.

Representing data

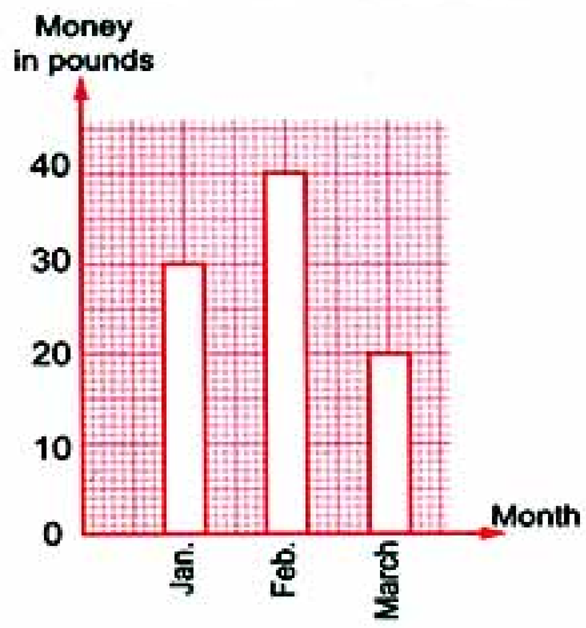
There are different methods to represent data as the following :

Bar line graph

For Example :

The following table shows the sum of money which Youssef saved in 3 months :

Month	Jan.	Feb.	March
Money in pounds	30	40	20

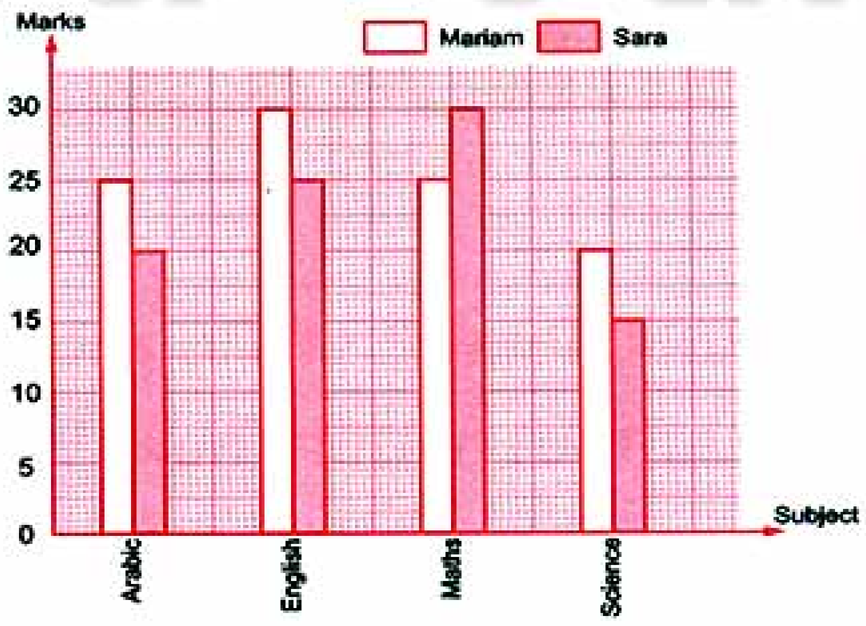


Double bars graph

For Example :

The following table shows the marks of Mariam and Sara of some subjects in a school :

Name \ Subject	Arabic	English	Maths	Science
Mariam	25	30	25	20
Sara	20	25	30	15



Tree-diagram

For Example :

The following tree-diagram how to find different 3-digit numbers are there using the digits 2 , 3 , 7

2 → 3 → 7 → 237
2 → 7 → 3 → 273

3 → 2 → 7 → 327
3 → 7 → 2 → 372

7 → 2 → 3 → 723
7 → 3 → 2 → 732

There are 6 numbers.

Summary

Probability

- **Probability of an event A "P (A)"** = $\frac{\text{The number of ways event A can occur}}{\text{The total number of possible outcomes}}$

Remarks

1. The probability of the impossible event = 0
2. The probability of the certain event = 1
3. The probability of the possible event is between zero and 1
4. The sum of probabilities of all possible events = 1

Model Examinations of the School Book

Model 1

Answer the following questions :

1 Choose the correct answer :

(1) The value of the digit 7 in the number 0.375 is ....
(70 or 7 or 0.7 or 0.07)

(2) The probability of the sure event = ... (0 or 0.5 or 1 or 2)

(3) $\frac{17}{5}$ = ... ($2\frac{3}{5}$ or $2\frac{4}{5}$ or $3\frac{1}{5}$ or $3\frac{2}{5}$)

(4) In a rectangle , the diagonal divides it into two .... triangles.
(congruent or acute-angled or isosceles or equilateral)

(5) The number that included between 0.64 and 0.65 is ....
(0.655 or 0.645 or 0.635 or 0.625)

(6) $\frac{7}{20}$ .... $\frac{17}{20}$ (> or = or < or ≃)

(7) The number of axes of symmetry of a square = ...
(0 or 2 or 3 or 4)

(8) The probability of the occurrence of getting an even number when tossing a die once = ... ($\frac{1}{6}$ or $\frac{2}{6}$ or $\frac{3}{4}$ or $\frac{1}{2}$)

(9) 3.5 tons = ... kg. (35 or 350 or 3 500 or 35 000)

(10) 6 457 ≃ .... (to the nearest hundred)
(640 or 6 400 or 6 500 or 645 700)

(11) .... is one of methods of collecting data.
(Congruence or Equality or Observation or Parallelism)

(12) $3\frac{5}{100}$ = ... (3.05 or 3.5 or 5.3 or 5.3)

(13) 3 279 ÷ 100 = ... (0.3279 or 3.279 or 32.79 or 327 900)

(14) The number of lines of symmetry of the equilateral triangle = ...
(3 or 2 or 1 or 0)

(15) 3 hours = ……… minutes. (30 or 60 or 90 or 180)

(16) 78 ÷ 100 = ……… (7.8 or 0.78 or 0.078 or 7 800)

2 Complete :

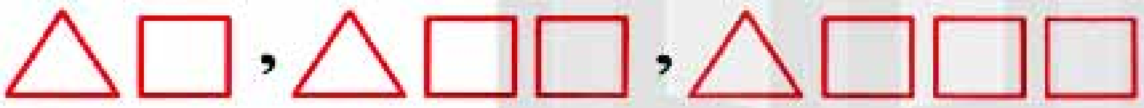
(17) $\frac{1}{5} + \frac{4}{5} = \frac{\dots\dots}{\dots\dots} = \dots\dots$

(18) 7 642 ≃ ……… (to the nearest thousand)

(19) The probability of appearance a tail when tossing a coin once = ………

(20) 48 hours = ……… days.

(21) $\frac{3}{10} + 0.8 = \dots\dots$

(22)  , ……… (in the same pattern)

3 Answer the following :

(23) 52.46 – 2.731 = ……… ≃ ……… (to the nearest unit)

(24) Omnia bought a group of toys for 34.75 pounds and a dress for 26.3 pounds. If she had a banknote paper of 100 pounds , find the money left with her.

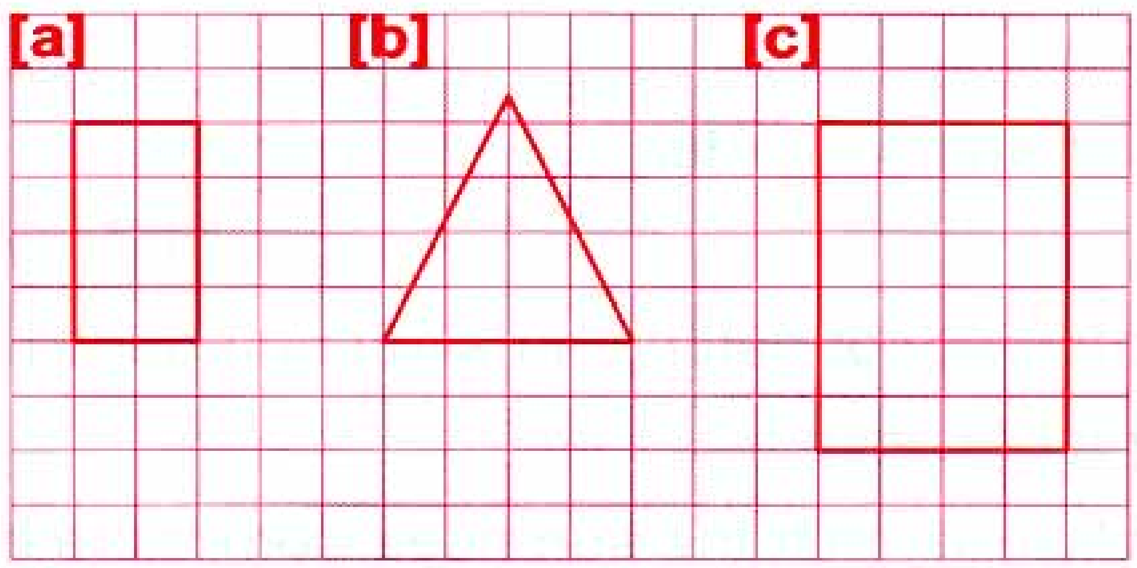
……………………………………………………………………………………………

……………………………………………………………………………………………

(25) A box contains 5 similar balls , 2 of them are blue , 3 are red , a ball is selected at random , find the probability that ball is red.

The probability of the selected ball is red = ………………………

(26) Draw the lines of symmetry of each of the following :



Model 2

Answer the following questions :

1 Choose the correct answer :

(1) $\frac{1}{3} + \frac{2}{3} = \cdots\cdots$ ($\frac{1}{3}$ or $\frac{2}{3}$ or $\frac{3}{6}$ or 1)

(2) 8 731 ≃ ⋯⋯ (to the nearest thousand)
(800 or 8 000 or 900 or 9 000)

(3) Number of lines of symmetry for the square = ⋯⋯
(2 or 3 or 4 or 6)

(4) $\frac{4}{10} + 0.6 = \cdots\cdots$ (4.6 or 6.4 or 1 or 0.1)

(5) 3 days = ⋯⋯ hours. (24 or 48 or 72 or 92)

(6) The value of the digit 8 in the number 0.486 is ⋯⋯
(8 or 0.8 or 0.08 or 80)

(7) The number ⋯⋯ is included between 0.37 and 0.38
(0.385 or 0.375 or 0.347 or 0.357)

(8) The probability of appearance a head when tossing a coin once = ⋯⋯
(0 or $\frac{1}{2}$ or 1 or 2)

(9) 96.43 ☐ $9\frac{648}{1\,000}$ (> or < or = or ≃)

(10) In a rectangle , the diagonal divides it in two ⋯⋯ triangles.
(congruent or obtuse-angled or equilateral or isosceles)

(11) A square of side length 5 cm. is congruent to ⋯⋯
(a rectangle of dimensions 7 cm. and 5 cm. or
an equilateral triangle of side length 5 cm. or
a square of side length 5 cm. or a rhombus of side length 5 cm.)

(12) 567.47 ≃ ⋯⋯ (to the nearest tenth)
(567.4 or 567.7 or 567.5 or 567.3)

(13) $\frac{15}{25} = \cdots\cdots$ ($\frac{1}{3}$ or $\frac{2}{5}$ or $\frac{3}{5}$ or $\frac{5}{3}$)

(14) One hour and a quarter = ⋯⋯ minutes.
(57 or 65 or 75 or 125)

(15) The probability of getting an even number when
tossing a die once = ⋯⋯ (0 or $\frac{1}{4}$ or $\frac{1}{3}$ or $\frac{1}{2}$)

(16) The probability that the sun rises from the east = ⋯⋯
(0 or $\frac{1}{4}$ or $\frac{1}{2}$ or 1)

2 Complete the following :

(17) $\frac{4}{8} - \frac{1}{4} =$ ....

(18) 3.5 tons = ... kg.

(19) The probability of the impossible event = ...

(20) $4\frac{7}{50}$ = ... (decimal number)

(21) 7 units , 5 thousandths = ...

(22) Two rectangles are congruent if ....

3 Answer the following :

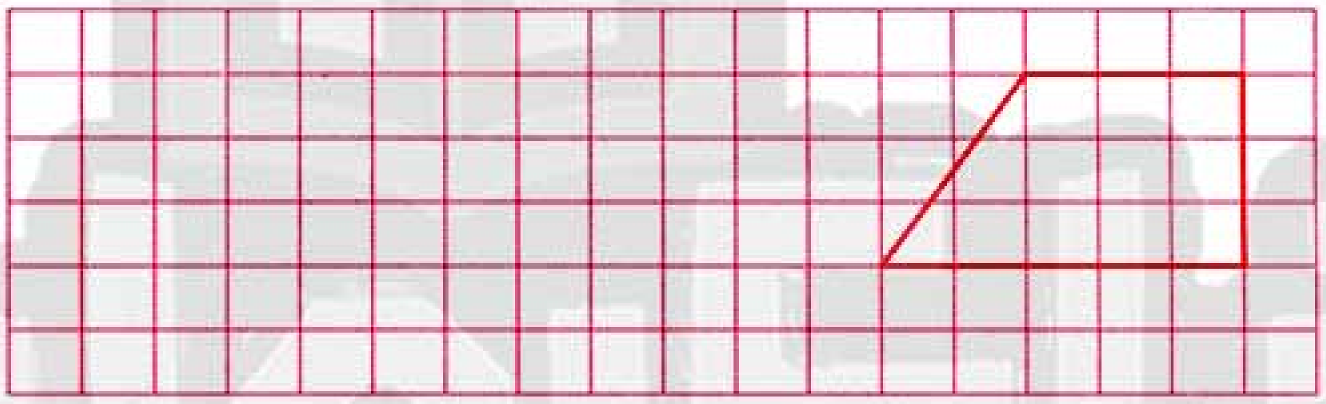
(23) Arrange the following in an ascending order :

5.8 , 5.08 , 58 , 8.5 and 8.05

The order is : .... , ... , ... , ... and ....

(24) 46 235 ÷ 1 000 = ...

(25) Draw a congruent figure to the drawn figure on the same lattice :



(26) The following table shows the number of pupils for the first four grades in a primary school :

Grade	Number of pupils
First	60
Second	80
Third	100
Fourth	70

Represent these data by a bar line graph.

Model 3

Answer the following questions :

1 Choose the correct answer :

(1) 6 thousandths , 4 hundredths = ...

(0.46 **or** 0.046 **or** 0.64 **or** 0.0064)

(2) $\frac{1}{2}$ litre = ... cm^3 (5 **or** 50 **or** 500 **or** 5 000)

(3) 4.2 ☐ 4.20 (> **or** < **or** = **or** otherwise)

(4) 251 056 ≃ 251 100 (to the nearest ....)

(10 000 **or** 1 000 **or** 100 **or** 10)

(5) The number of lines of symmetry of = ...

(1 **or** 2 **or** 3 **or** 4)

(6) $9\frac{7}{10}$ = ... (9.07 **or** 9.7 **or** 9.007 **or** 7.09)

(7) The probability of the impossible event = ...

(0 **or** $\frac{1}{2}$ **or** 1 **or** 2)

(8) The value of the digit 4 in the number 0.241 is ....

(0.04 **or** 0.4 **or** 4 **or** 40)

(9) Number of lines of symmetry of the isosceles triangle = ...

(1 **or** 2 **or** 3 **or** 4)

(10) $7\frac{1}{3}$ = ... ($\frac{3}{22}$ **or** $\frac{8}{3}$ **or** $\frac{10}{3}$ **or** $\frac{22}{3}$)

(11) The probability of the appearance an odd number when tossing a die once = ... ($\frac{1}{3}$ **or** $\frac{1}{2}$ **or** $\frac{1}{6}$ **or** $\frac{3}{4}$)

(12) The number that included between 0.730 and 0.744 is ....

(0.745 **or** 0.755 **or** 0.735 **or** 0.725)

(13) $657\frac{4}{5}$ ≃ .... (to the nearest unit)

(657 **or** 658 **or** 655 **or** 659)

(14) $7\frac{1}{2}$ kg. = ………… gm. (75 *or* 750 *or* 7 500 *or* 7 005)

(15) A box contains 5 similar balls , 2 of them are red , the others are green , if one ball is drawn randomly , then the probability of drawing a red ball = ………… ($\frac{2}{5}$ *or* $\frac{3}{5}$ *or* 1 *or* 0)

2 Complete :

(16) ○△○ , ○△△○ , ○△△△○ , ……… (in the same pattern)

(17) Two rectangles are congruent if ………

(18) $\frac{4}{10}$ + 0.6 = ………

(19) The probability of appearance a head when tossing a coin once = …………

(20) $\frac{3}{4}$ hour = ………… minutes.

(21) $\frac{5}{6} - \frac{1}{3}$ = …………

(22) $4\frac{3}{100}$ = ………… ≃ ………… (to the nearest tenth)

3 Answer the following :

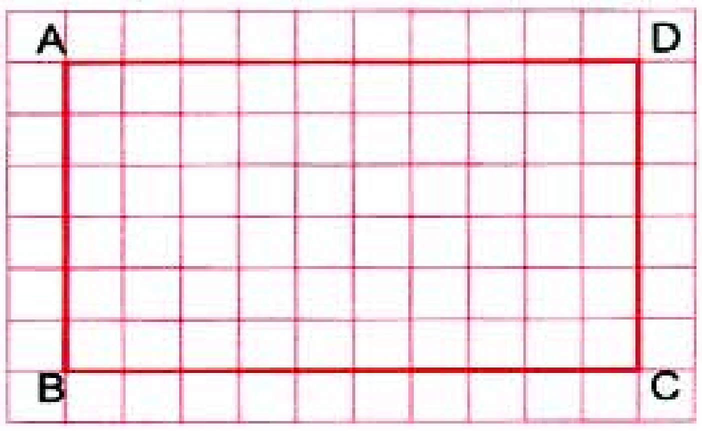
(23) 36.48 – 18.37 = ………… ≃ ………… (to the nearest unit)

(24) Mazen has 35 pounds , he bought a ball for 12.75 pounds and a book for 17.25 pounds. What is the remainder with him ?

…………………………………………………………………………………………

…………………………………………………………………………………………

(25) In the opposite figure :



[a] What is the name of the figure ABCD ?

…………………………………………………………………………

[b] How many lines of symmetry for this figure ?

…………………………………………………………………………

[c] Draw a line divides this figure into two congruent figures.

(26) The following table shows the number of travellers of first four carriages in a train :

Carriages	First	Second	Third	Fourth
Number of travellers	60	55	70	65

Represent these data by a bar line graph.

Model examination for the special needs students

Answer the following questions :

1 Choose the correct answer :

(1) $\frac{1}{4} + \frac{3}{4} = \dots\dots$ ($\frac{1}{4}$ or $\frac{1}{2}$ or 1)

(2) The value of the digit 3 in the number 0.315 is .... (30 or 3 or 0.3)

(3) $\frac{2}{3}$ .... $\frac{3}{2}$ (> or < or =)

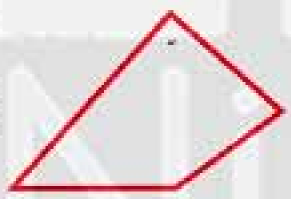
(4) 6 475 ≃ .... (to the nearest hundred) (6 000 or 5 600 or 6 500)

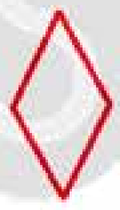
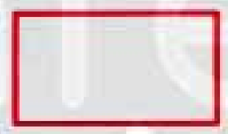
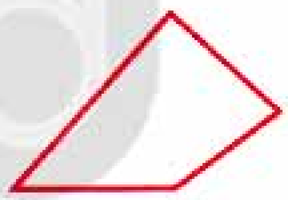
(5) 5 tons = ... kg. (500 or 5 000 or 1 000)

(6) 354 ÷ 10 = ... (35.4 or 3 540 or 3.54)

(7) 48 hours = ... days. (1 or 2 or 3)

(8) The probability of the impossible event = ... (0 or $\frac{1}{2}$ or 1)

(9) The figure  is congruent to the figure ....

( or  or )

(10) 5 litres = ... dm^3 (5 or 5 000 or 500)

2 Complete using the given answers :

(3 , 10 , 0.03 , $\frac{1}{2}$, 0.3 , 1)

(11) 2.3 – 2 = ...

(12) $\frac{4}{8} = \frac{\dots\dots}{2}$

(13) 30 , 3 , 0.3 , ... (in the same pattern)

(14) The number of lines of symmetry of an equilateral triangle = ...

(15) The probability of appearance a tail when tossing a coin once = ...

3 Join from the column (A) to the suitable one of the column (B) :

(A)	(B)
(16) $\frac{3}{4}$ hours = ... minutes.	0.4
(17) $\frac{2}{5}$ = ... (in decimal form)	0.3
(18) 0.7 + ... = 1	45
(19) 2.6 ≃ .... (to the nearest unit)	4
(20) The number of lines of symmetry of a square = ...	3

Some Schools' Examinations from Different Governorates

1 Cairo Governorate

Nasr City East Educational Directorate
Manaret El-Eman Language Schools

Answer the following questions :

1 **Choose the correct answer :**

(1) $4\frac{3}{100}$ = ... (4.03 or 4.3 or 4.003 or 43)

(2) The isosceles trapezium has .... line(s) of symmetry. (1 or 2 or 3 or 4)

(3) 32 745 ≃ .... (to the nearest thousand) (32 000 or 33 045 or 33 000 or 30 000)

(4) 1.5 ton = ... kg. (0.15 or 1 500 or 150 000 or 0.0015)

(5) 0.003 + 0.06 + 8 = ... (0.368 or 0.863 or 8.63 or 8.063)

(6) The probability of the certain event = ... (0 or 0.5 or 1 or 2)

(7) If Δ ABC ≡ Δ MON , then MO = ... (AB or BC or AC or ON)

(8) Thirty-five and six tenths = ... (35.06 or $35\frac{6}{10}$ or 356 or $35\frac{6}{100}$)

2 **Choose the correct answer :**

(9) 180 litres = ... dm^3. (0.18 or 18 or 18 000 or 180)

(10) The .... has four lines of symmetry. (rectangle or square or rhombus or parallelogram)

(11) The value of 9 in 28.59 = ... (0.9 or 9.9 or 0.09 or 0.009)

(12) 2 days and 2 hours = ... hours. (22 or 50 or 46 or 4)

(13) $\frac{1}{3} + \frac{1}{5}$ = ... ($\frac{1}{4}$ or $\frac{2}{15}$ or $\frac{1}{8}$ or $\frac{8}{15}$)

(14) 785 ÷ 10 ☐ 8 000 ÷ 100 (< or > or = or ≥)

(15) The decimal number that lies between 0.35 and 0.4 is .... (0.5 or 0.2 or 0.39 or 0.45)

(16) The probability of appearing the number 8 when rolling a die once is .... (impossible or 0.6 or 0 or $\frac{1}{6}$)

3 Complete :

(1) 5 dm^3 = ... millilitres.

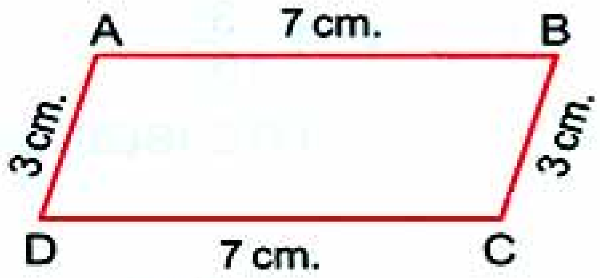
(2) 14 225 ÷ 100 = ... ≃ .... (to the nearest tenth)

(3) 75.04 (in letters) = ...

(4) 34.9 – 23.56 = ...

(5) A box contains identical balls , 5 red , 3 yellow and 2 green , if a ball is selected randomly , then the probability of getting a green or a red ball is ....

(6) The figure ABCD is called a .... and it has .... lines of symmetry.



4 Answer the following :

(1) Arrange in a descending order :

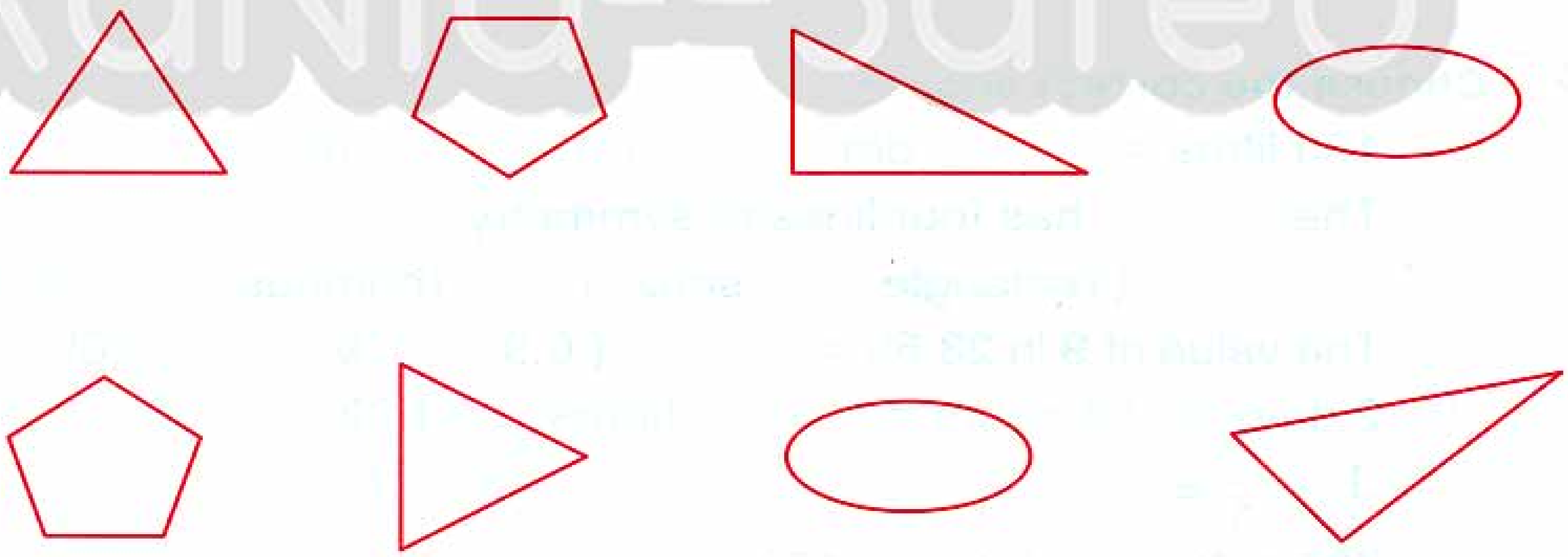
9.08 , 12.95 , 8.774 and 9.012

The order is : .... , ... , ... and ....

(2) Mohammad bought a copybook for L.E. 7.85 and a pen for L.E. 3.75 How much money did he pay ?

Mohammad paid = ...

(3) Join the congruent figures :



(4) The following table shows the money saved by Ahmed during 4 months :

Month	1st	2nd	3rd	4th
Money in L.E.	30	45	40	25

Represent these data by a bar line graph.

2 Cairo Governorate

El Zeitun Directorate of Education
Dahab Language School

Answer the following questions :

1 Choose the correct answer :

(1) 237 ≃ .... (to the nearest ten) (23 or 240 or 230 or 200)

(2) The rectangle has .... lines of symmetry. (2 or 1 or 0 or 4)

(3) 2 litres ☐ 2 dm^3 (< or > or =)

(4) The value of 3 in the number 2.3 is ....

(0.3 or 0.003 or 3 or 0.03)

(5) .... + 0.6 = 1 (0.6 or 0.2 or 0.4 or 0.3)

(6) 750 gm. ☐ $\frac{3}{4}$ kg. (< or > or =)

(7) 2.09 ☐ 2.1 (< or > or =)

(8) When you flip a coin once the probability of getting a head is ....

(zero or 1 or $\frac{1}{2}$ or $\frac{1}{6}$)

(9) Two and five tenths = ... (2.5 or 25 or 0.25 or 2.05)

(10) 6 000 kg. = ... tons. (60 or 6 or 0.6 or 600)

(11) .... + 0.2 = 6.2 (2 or 6 or 0.6 or 0.2)

(12) $2\frac{1}{5}$ = ... (as an improper fraction) ($\frac{10}{5}$ or $\frac{11}{5}$ or 11 or $\frac{8}{5}$)

(13) 2 days = ... hours. (60 or 24 or 48 or 120)

(14) $3\frac{8}{100}$ = ... (as a decimal number) (3.8 or 3.08 or 0.008 or 38)

2 Complete :

(1) $\frac{1}{4} + \frac{1}{5}$ = ...

(2) If Δ ABC $\equiv$ Δ XYZ , then BC = ...

(3) 345 ÷ 100 = ...

(4) The square has .... lines of symmetry.

(5) 32.25 + 31.83 = ... ≃ .... (to the nearest unit)

(6) $2\frac{1}{5}$ = ... (as a decimal number)

(7) The probability of impossible event = ...

(8) 6 000 m. = ... km.

3 Answer the following :

(1) A box contains 2 red balls , 5 white balls and 2 green balls , one ball is drawn blindly.

Find the probability of getting :

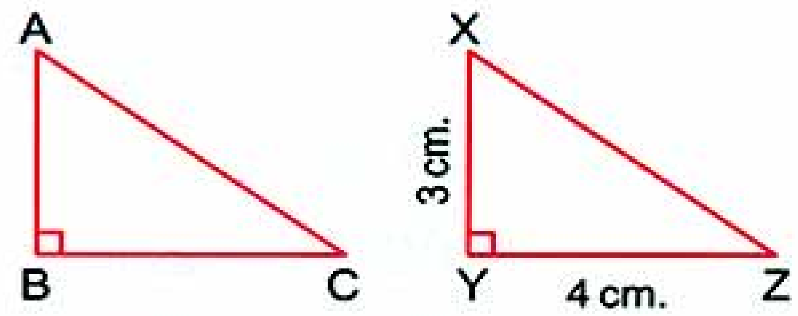
[a] Red ball = ... **[b]** Green ball = ...

[c] White ball = ... **[d]** Yellow ball = ...

(2) Ahmed had 48.8 pounds. He bought a shirt for 36.7 pounds.
Calculate remainder him.

....

(3) In the opposite figure :



Δ ABC $\equiv$ Δ XYZ

Complete :

[a] AB = ... cm.

[b] BC = ... cm.

[c] m (∠ B) = m (∠ ....)

[d] $\overline{AC}$ ≡ ....

(4) The following table shows the studying hours of Waleed and Hesham for five days :

Day / Name	Sat.	Sun.	Mon.	Tues.	Wed.
Waleed	4	4	3	4	5
Hesham	3	2	1	2	3

Represent these data by double bar graph.

3 Cairo Governorate

El Nozha Educational Zone
Maths Supervision

Answer the following questions :

1 Choose the correct answer :

(1) The probability of getting a head when tossing a coin once = ... (0 **or** 1 **or** 2 **or** $\frac{1}{2}$)

(2) 684 ÷ 100 = ... (68.4 **or** 0.684 **or** 6.84 **or** 68.4)

(3) The value of the digit 8 in the number 0.382 is .... (80 **or** 8 **or** 0.8 **or** 0.08)

(4) $\frac{15}{25}$ = ... ($\frac{1}{3}$ **or** $\frac{2}{5}$ **or** $\frac{3}{5}$ **or** $\frac{5}{3}$)

(5) 5 litres = ... mL (50 **or** 500 **or** 5 000 **or** 5)

(6) $9\frac{7}{10}$ = ... (9.07 **or** 9.7 **or** 9.007 **or** 7.09)

(7) 48 hours = ... day(s) (1 **or** 2 **or** 3 **or** 4)

(8) $\frac{7}{20}$ ☐ $\frac{17}{20}$ (> **or** < **or** =)

(9) Number of lines of symmetry of the equilateral triangle = ...
(3 *or* 2 *or* 1 *or* 0)

(10) 6 452 ≃ 6 000 (to the nearest ....)
(10 000 *or* 1 000 *or* 100 *or* 10)

(11) $\frac{1}{4}$ ton = ... kg. (500 *or* 250 *or* 1 000)

(12) The probability of impossible event = ...
(0 *or* 1 *or* 2 *or* $\frac{1}{2}$)

(13) 4.7 + 3.07 = ... (7.14 *or* 8.4 *or* 7.77)

(14) The unit for measuring capacity is ....
(litre *or* kg. *or* ton *or* hour)

(15) The probability of a certain event is .... (1 *or* 0 *or* $\frac{1}{2}$)

(16) The diagonal of rectangle divides it into two .... triangles.
(isosceles *or* equilateral *or* congruent)

2 Complete :

(1) 1.127 + 3.642 = ... ≃ .... (to the nearest tenth)

(2) The isosceles triangle has .... line of symmetry.

(3) The place value of the digit 2 in the number 3.254 is ....

(4) If $\Delta ABC \equiv \Delta XYZ$, then AC = ...

(5) 3 tons = ... kg.

(6) 5 800 ÷ 1 000 ≃ .... (to the nearest unit)

3 Answer the following :

(1) Ahmed has 48.8 pounds , he bought a ball for 13.75 pounds.
Find the remainder with him.

....

(2) A box contains 5 red balls , 3 blue balls and 7 green balls , all are equal in size , if one ball is drawn randomly , find the probability of getting :

[a] blue ball = ... **[b]** red ball = ...

(3) Complete : 7 000 gm. = ... kg.

(4) Repersent the following table by a bar line graph :

The activity	Social	Cultural	Sports	Arts
No. of participants	30	20	50	40

4 Cairo Governorate

New Cairo Educational Zone
Dr. Ahmed Zewail Distin. Lang. School

Answer the following questions :

1 Choose the correct answer :

(1) The value of the digit 8 in the number 14.182 is ....

(0.8 or 0.08 or 0.008 or 80)

(2) $3\frac{3}{5}$ = ... ($\frac{18}{5}$ or $\frac{5}{18}$ or $\frac{15}{3}$ or $\frac{3}{5}$)

(3) The number of symmetry lines of the square is ....

(4 or 3 or 2 or 1)

(4) 567.47 ≃ .... (to the nearest unit)

(567.04 or 567.57 or 567.4 or 567)

(5) 3 days = ... hours. (24 or 48 or 72 or 96)

(6) The probability that the sun rises from west = ...

(1 or third or half or 0)

(7) The number that is included between 0.12 and 0.13 is ....

(0.115 or 0.125 or 0.135 or 0.145)

(8) The probability of getting an odd number when tossing a die once is .... (0 or $\frac{2}{3}$ or $\frac{1}{2}$ or 1)

2 Choose the correct answer :

(9) If the polygon ABCD ≡ the polygon XYZL , then $\angle$ Z ≡ $\angle$ ....

(A *or* B *or* C *or* D)

(10) The number of lines of symmetry of isosceles triangle is ....

(0 *or* 1 *or* 2 *or* 4)

(11) 4.5 tons = ... kg. (45 *or* 450 *or* 4 500 *or* 45 000)

(12) 5 487 ÷ 1 000 = ... (54.87 *or* 5.487 *or* 548.7 *or* 5 487)

(13) 6.25 ☐ $6\frac{1}{4}$ (= *or* > *or* < *or* otherwise)

(14) 785 412 ≃ 785 400 (to the nearest ....)

(unit *or* 10 *or* 100 *or* 1 000)

(15) $\frac{15}{25}$ = ... ($\frac{1}{2}$ *or* $\frac{2}{5}$ *or* $\frac{5}{3}$ *or* $\frac{3}{5}$)

(16) The probability of the sure event = ... ($\frac{1}{2}$ *or* 1 *or* 0 *or* $\frac{5}{6}$)

3 Complete each of the following :

(17) $\frac{5}{8} + \frac{1}{4}$ = ...

(18) A box contains 8 identical balls , 4 are yellow , 3 are red and 1 ball is green. The probability of drawing a red ball = ...

(19) Seven units and five tenths = ...

(20) $1\frac{1}{2}$ litres = ... cm^3

(21) If Δ LMN ≡ Δ OPQ , then $\overline{LM}$ ≡ ....

(22) 11.52 – 9.21 = ... ≃ .... (to the nearest tenth)

4 Answer the following :

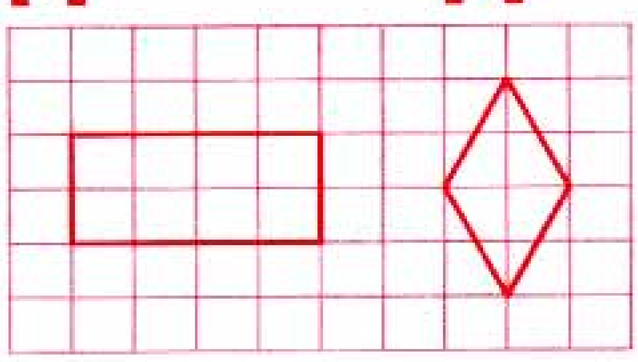
(23) Arrange the following numbers in an ascending order :

4.7 , 4.07 , 47 , 7.4 and 7.04

The order is : .... , ... , ... , ... and ....

(24) Draw all lines of symmetry of each of following shapes :

[a] [b]



(25) Ali has 52 pounds. He bought a pen for 27.75 pounds.
How much money left with him ?

....

(26) The following table shows the number of pupils in school activities :

Activities	Social	Cultural	Sports	Art
Number of pupils	6	8	5	7

Represent the data by a bar line graph.

5 Giza Governorate

El-Haram Educational Zone
Al-Mostakbal Modern Language School

Answer the following questions :

1 Choose the correct answer :

(1) $4\frac{3}{100}$ = ... (4.3 *or* 4.03 *or* 403 *or* 4.003)

(2) The probability of the appearance of getting a head when tossing a coin once = ... (0 *or* $\frac{1}{2}$ *or* 1 *or* 2)

(3) The polygon ABCD ≡ the polygon XYZL , then ∠ B ≡ ∠ ....
(Y *or* X *or* Z *or* L)

Final Examinations

(4) The square has .... lines of symmetry. (0 or 3 or 2 or 4)

(5) The value of the digit 4 in the number 0.2<u>4</u>1 is ....

(0.04 or 0.4 or 4 or 40)

(6) $4\frac{1}{3}$ = ... (as an improper fraction) ($\frac{13}{3}$ or $\frac{12}{3}$ or 403 or 4.03)

(7) The two squares are congruent if their sides are ....

(different or equal in length or parallel or perpendicular)

(8) 5 486 ≃ .... (to the nearest hundred)

(5 500 or 540 or 5 400 or 548 600)

(9) Five fourths = ... (4.5 or $\frac{4}{5}$ or 1 or $\frac{5}{4}$)

(10) 5.896 ≃ .... (to the nearest unit) (5.8 or 589.6 or 6 or 5.9)

(11) Number of lines of symmetry of square ☐ Number of lines of symmetry of rectangle. (< or = or >)

(12) 4 237 ÷ 100 = ... (42.37 or 0.4237 or 423 700 or 4.237)

(13) 2 litre ☐ 2 dm^3. (< or = or >)

(14) The probability of impossible event is .... (0 or 1 or 2 or $\frac{1}{2}$)

(15) 2 days = ... hours. (24 or 48 or 72 or 12)

(16) 7 kg. ☐ 6 500 gm. (< or = or >)

2 Complete each of the following :

(1) Five and two tenths = ... (in digits)

(2) $\frac{3}{5} + \frac{3}{4}$ = ...

(3) 152 kg. = ... gm.

(4) The place value of 5 in the number 21.<u>5</u>9 is ....

(5) The isosceles triangle has .... line(s) of symmetry.

(6) The probability of certain event = ...

3 Answer the following :

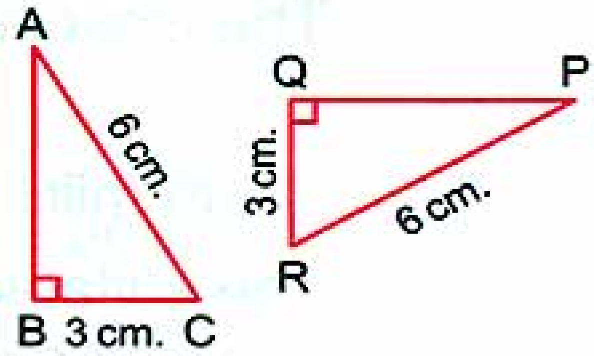
(1) Find : 32.02 + 17.25 = ... ≃ .... (to the nearest ten)

(2) A box contains 7 red balls , 2 black balls and 2 green balls.

Find the probability of :

[a] Drawing a red ball = ... [b] Drawing a green ball = ...

(3) In the opposite figure :



$\Delta ABC \equiv \Delta PQR$, complete :

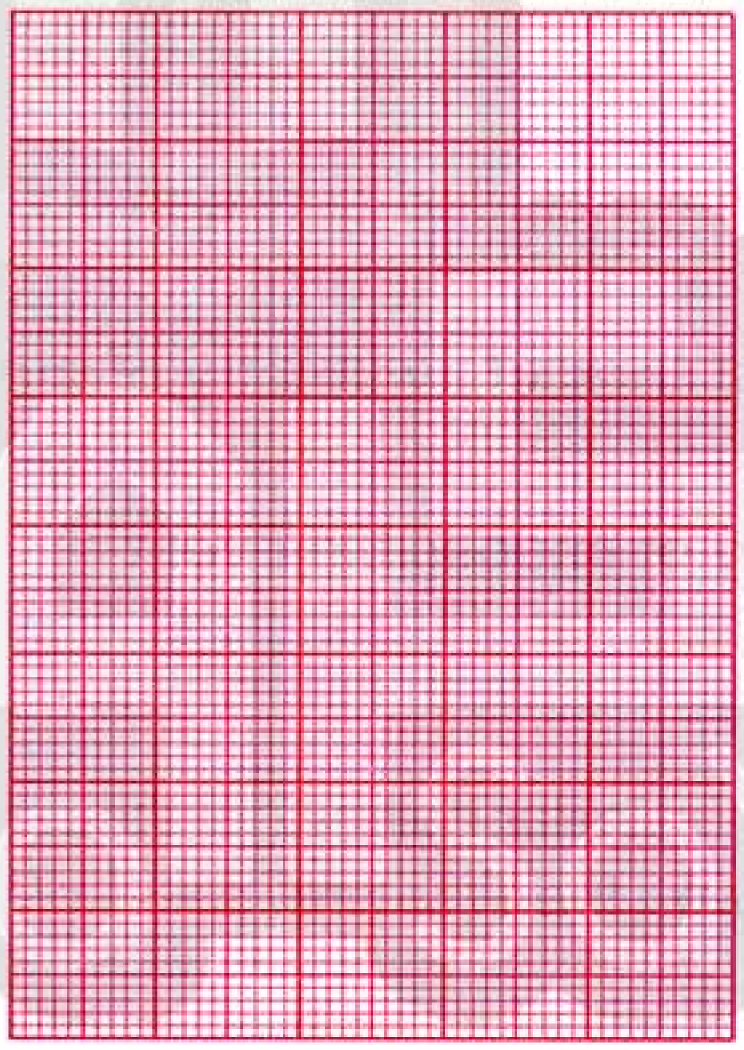
[a] $\angle C \equiv \angle$ …………… **[b]** $\overline{AB} \equiv$ ……………

[c] $\overline{BC} \equiv$ …………… **[d]** $\angle P \equiv \angle$ ……………

(4) The following table shows the number of travelers in the first four carriages of a train :

Carriage	First	Second	Third	Fourth
Number of travelers	50	40	60	70

Represent the following data by a bar line graph.



6 Giza Governorate

Dokki Educational Directorate
Modern Narmer Langague School

Answer the following questions :

1 **Choose the correct answer :**

(1) $7\frac{4}{5}$ = …………… (7.8 **or** 7.4 **or** 7.5 **or** 7.08)

(2) The value of the digit 3 in the number 7.315 is ……………
(300 **or** 30 **or** 0.3 **or** 0.03)

(3) The number 357 to the nearest ten = ……………
(350 **or** 400 **or** 360 **or** 300)

(4) The isosceles trapezium has .... of symmetry.
(3 lines or 2 lines or one line or 4 lines)

(5) 5 800 millilitres = ... litres. (58 or 5.8 or 0.58 or 580)

(6) The suitable weight a truck can be loaded with ....
(3 tons or 15 kilograms or 3 500 grams or 300 tons)

(7) In a rectangle, the diagonal divideds it into two .... triangles.
(congruent or acute-angled or equilateral or isosceles)

(8) $\frac{1}{5} + \frac{4}{5} =$ .... ($\frac{1}{5}$ or $\frac{5}{10}$ or 1 or $\frac{4}{5}$)

(9) 164.73 ≃ .... (to the nearest tenth)
(164.7 or 164.4 or 164.37 or 164)

(10) The probability of getting an odd number when tossing a die once = ...
(0 or $\frac{1}{4}$ or $\frac{1}{3}$ or $\frac{1}{2}$)

(11) The number that included between 0.75 and 0.766 is ....
(0.745 or 0.755 or 0.775 or 0.725)

(12) The number of lines of symmetry of the equilateral triangle is ....
(3 or 2 or 1 or 0)

(13) The probability of impossible event = ...
(0 or 1 or 0.5 or 2)

(14) $\frac{7}{5}$ ☐ 1.25 (< or > or = or ≤)

(15) A box contains 5 similar balls, 2 of them are green, the others are red, if one ball is drawn, then the probability of the drawn ball is red is ....
($\frac{1}{5}$ or $\frac{2}{5}$ or $\frac{3}{5}$ or $\frac{4}{5}$)

(16) 2 130 ÷ 100 = ... (21.3 or 2.13 or 213 or 0.213)

2 Complete each of the following :

(17) $\frac{3}{4} - \frac{1}{8} = \frac{\cdots\cdots}{\cdots\cdots}$

(18) $6\frac{7}{50}$ = ... (decimal number)

(19) The probability of the appearance of a head when tossing a coin once = ...

(20) $\frac{3}{10} + 0.9 =$ ....

(21) If the corresponding sides of two triangles are equal in length, then the two triangles are ....

(22) 72 hours = ... days.

3 **Answer the following :**

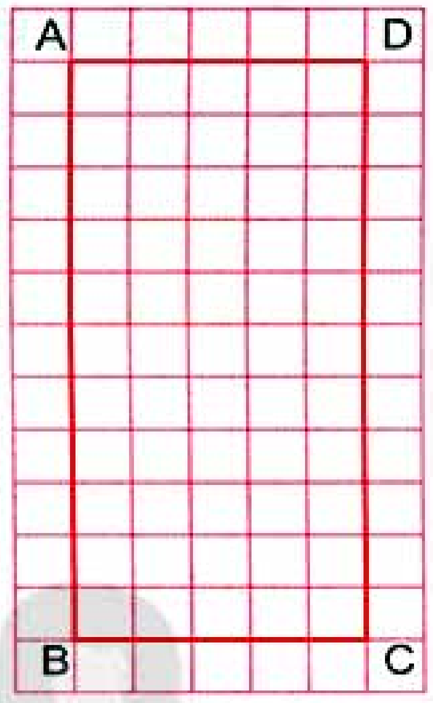
(23) Find : 55.6 + 83.7 = ... ≃ .... (to the nearest unit)

(24) Ali bought a ball for 34.75 pounds and a toy for 24.5 pounds , if he had 100 pounds. What is the money left with him ?

The money paid = ... = ... pounds.

The money left = ... = ... pounds.

(25) In the opposite figure :



[a] Write the name of the figure ABCD (............)

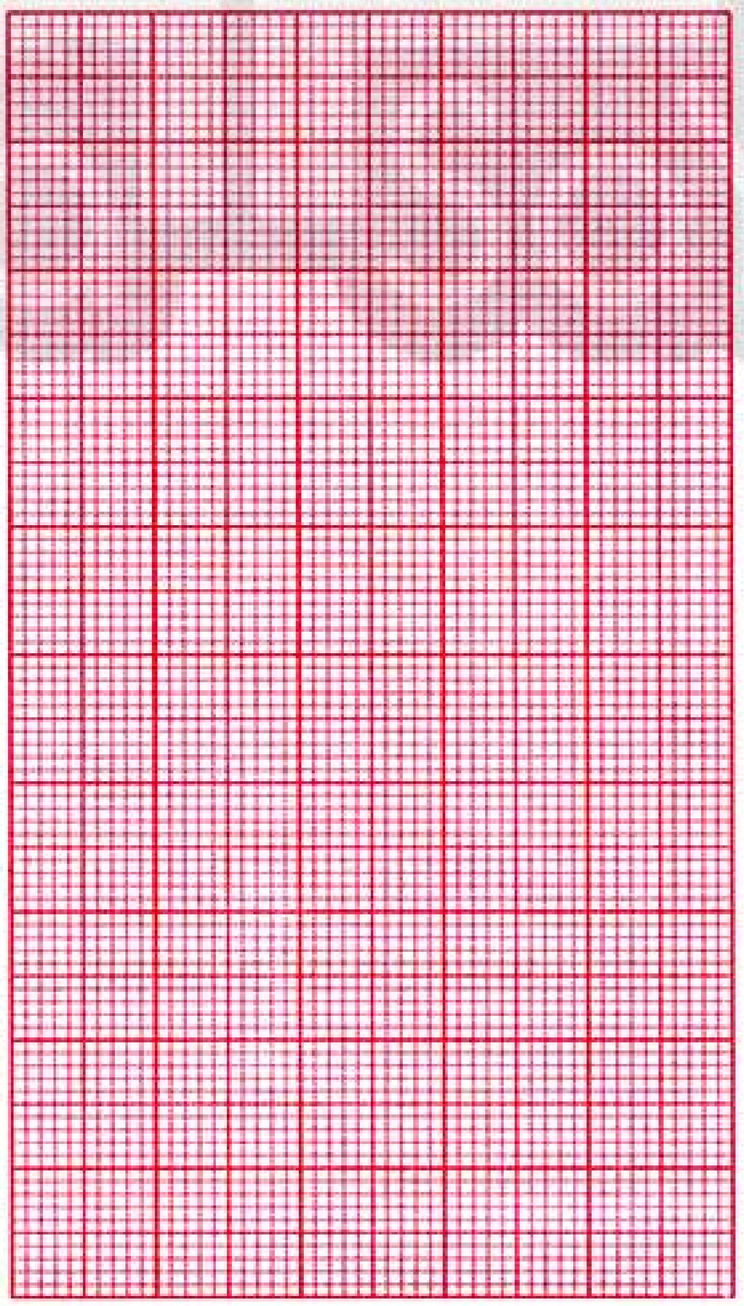
[b] Write the number of the lines of symmetry of the figure ABCD (............)

[c] Draw a line divides ABCD into two congruent figures.

(26) The following table shows the number of pupils in the first four grades in a school :

Grade	First	Second	Third	Fourth
Number of pupils	50	70	90	60

Represent these data by a bar line graph.



7 Alexandria Governorate

Mid Educational Zone
Mathematics Inspection

Answer the following questions :

1 Choose the correct answer :

(1) $18\frac{1}{25} \simeq$ .... (to the nearest unit) (18 or 19 or 25 or 11)

(2) 0.3 + 60 + 7 + 0.08 = ...
(0.3678 or 67.83 or 67.38 or 0.08637)

(3) $\frac{8}{9}$ ☐ $\frac{9}{10}$ (< or > or = or ≥)

(4) The value of 4 in 32.541 is .... (0.04 or 4 or 0.4 or 40)

(5) 0.08 + 1.6 > 1.6 + ... (0.006 or 0.4 or 0.8 or 1)

(6) 1 = ... + 0.23 (0.77 or 0.72 or 0.777 or 77)

(7) The square has .... lines of symmetry.
(0 or 1 or 2 or 3 or 4)

(8) A person sleeps daily for about ....
(42 hours or 500 minutes or 400 seconds or 60 seconds)

(9) The parallelogram has .... lines of symmetry.
(0 or 1 or 2 or 3 or 4)

(10) $6\frac{3}{4}$ kg. = ... gm. (675 or 6 750 or 67 500 or 67.5)

(11) The weight of a pencil = ...
(30 gm. or 30 kg. or 3 kg. or $\frac{1}{4}$ ton)

(12) 13.578 ≃ .... (to the nearest tenth) (13.5 or 13.6 or 13 or 10)

(13) The probability of the impossible event = ...
(zero or 1 or 0.5 or 2)

(14) The number that lies between 1.2 and 1.3 is ....
(1.33 or 1.45 or 1.11 or 1.25)

(15) Trapezium has .... lines of symmetry. (1 or 2 or 3 or 0)

(16) The probability of appearance of a head as throwing a metallic coin once is .... (1 or 0.5 or zero or 0.6)

2 Complete each of the following :

(1) 65 093 ≃ .... (to the nearest thousand)

(2) $\frac{1}{5} + \frac{2}{5} =$ ....

(3) 36 218 ÷ 100 = ...

(4) If Δ ABC ≡ Δ LMN , then BC = ...

(5) 5 litres = ... mL

(6) The probability of appearing an even number when throwing a fair dice once is ....

3 Answer the following :

(1) Mona has 398.5 pounds. She bought a dress for 276.75 pounds. Calculate the remainder with her.

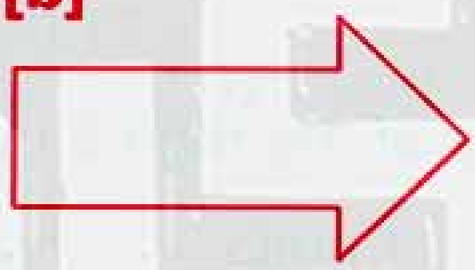
....

(2) Find : 2 552.46 + 42.731 = ... ≃ .... (to the nearest hundred)

(3) Draw one line symmetry of each of the following shapes :

[a]

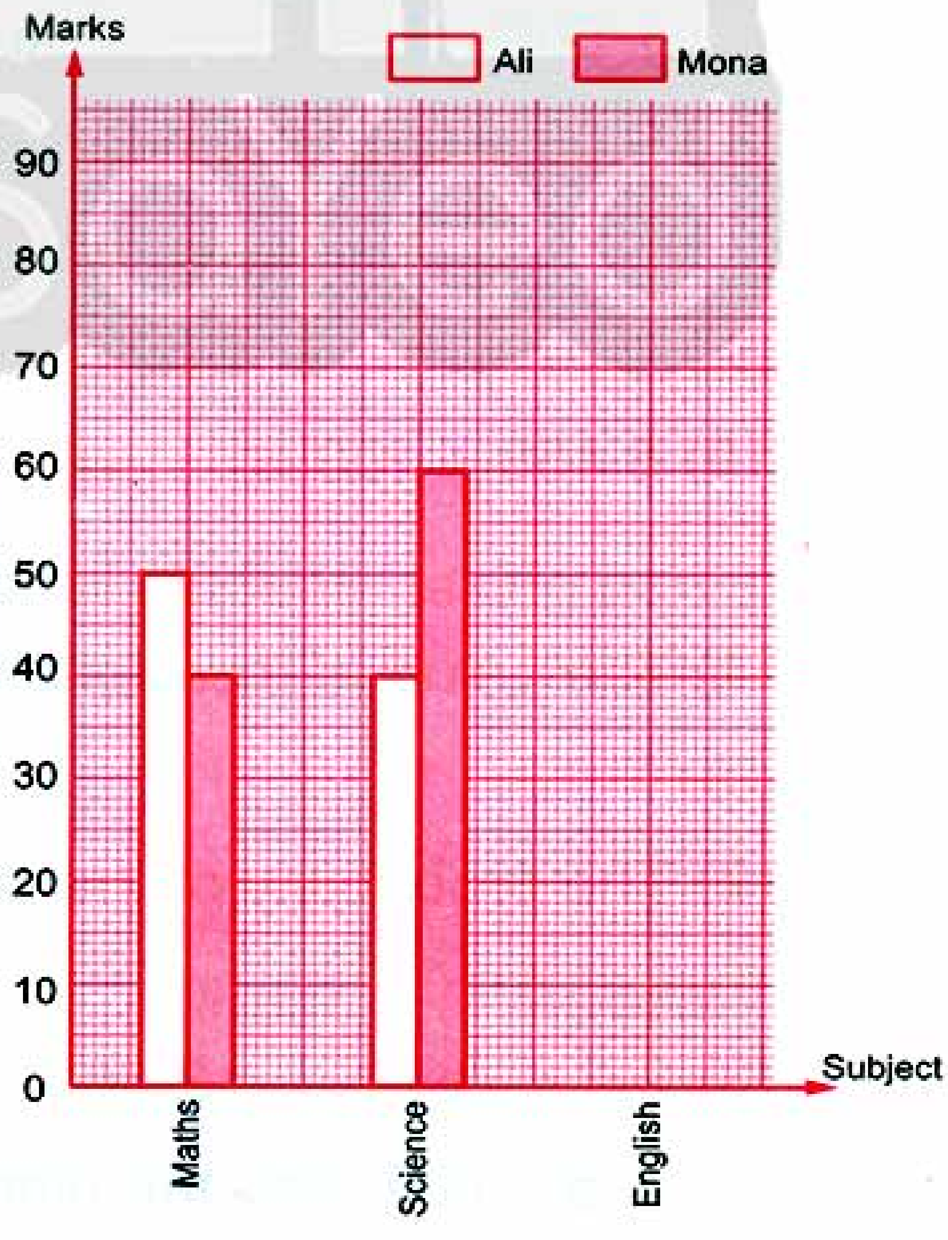
[b]



(4) The following table shows the marks of some school subjects of two pupils in a school and represented data by double bars.

Subject / Name	Maths	Science	Eng.
Ali	50	....	70
Mona	40	....	50

Complete the table and the graph.



8 Alexandria Governorate

El-Montazah Educational Directorate
Brilliance Language School

Answer the following questions :

1 Choose the correct answer :

(1) $4\frac{7}{100}$ as a decimal is .... (4.10 or 4.77 or 4.17 or 4.07)

(2) 8.5 = ... + 0.5 (85 or 8.5 or 8.55 or 8)

(3) If triangle ABC ≡ triangle XYZ , then $\overline{AB}$ ≡ ....
($\overline{BX}$ or $\overline{BC}$ or $\overline{XZ}$ or $\overline{XY}$)

(4) The probability of getting a head when tossing a coin once is ....
(0.25 or 0.5 or 1 or 0)

(5) 45.985 + 25.68 ≃ .... (to the nearest tenth)
(71.665 or 71.7 or 71.07 or 71.665)

(6) The place value of the digit 6 in the number 504.06 is ....
(units or hundredths or tenths or hundreds)

(7) 7 500 mL = ... litres (75 or 7.55 or 7.5 or 7)

(8) 9.06 ≃ 9 (to the nearest ....)
(ten or tenth or unit or hundred)

(9) $\frac{4}{5} - \frac{3}{7}$ = ... ($\frac{1}{2}$ or $\frac{43}{57}$ or $\frac{13}{35}$ or $1\frac{14}{35}$)

(10) 6 458 ÷ 100 ≃ .... (to the nearest unit)
(65 or 6.58 or 64.58 or 5)

(11) The value of the digit 7 in the number 5 284.07 is ....
(0.07 or 0.7 or units or 0.007)

(12) The probability of the certain event = ...
(1 or 2 or 0.5 or 0)

(13) 2.5 < .... < 2.58 (2.8 or 2.57 or 2.18 or 2.7)

(14) In a rectangle , the diagonal divides it into two .... triangles.
(equilateral or congruent or isosceles or parallel)

(15) 3 hours = ... minutes. (13 *or* 30 *or* 60 *or* 180)

(16) 3.8 tons = ... kg. (380 *or* 3.80 *or* 88 *or* 3 800)

2 Complete :

(17) $\frac{11}{5}$ = ... (as a mixed number)

(18) One and half day = ... hours.

(19) The isosceles triangle has .... line of symmetry.

(20) 20.3 – 2.03 = ... ≃ .... (to the nearest tenth)

(21) 31.643 + 0.983 = ... ≃ .... (to the nearest unit)

(22) Forty four and fourteen hundredths is written in digits as .... (as a decimal)

3 Answer the following :

(23) Arrange in an ascending order :

0.088 , 1 , 0.82 and 1.9

The order is : .... , ... , ... and ....

(24) Ahmed had L.E. 100 , he bought a group of toys for 38.25 L.E. , find the remainder with him.

....

(25) If the polygon ABCD ≡ the polygon XYZL , complete :

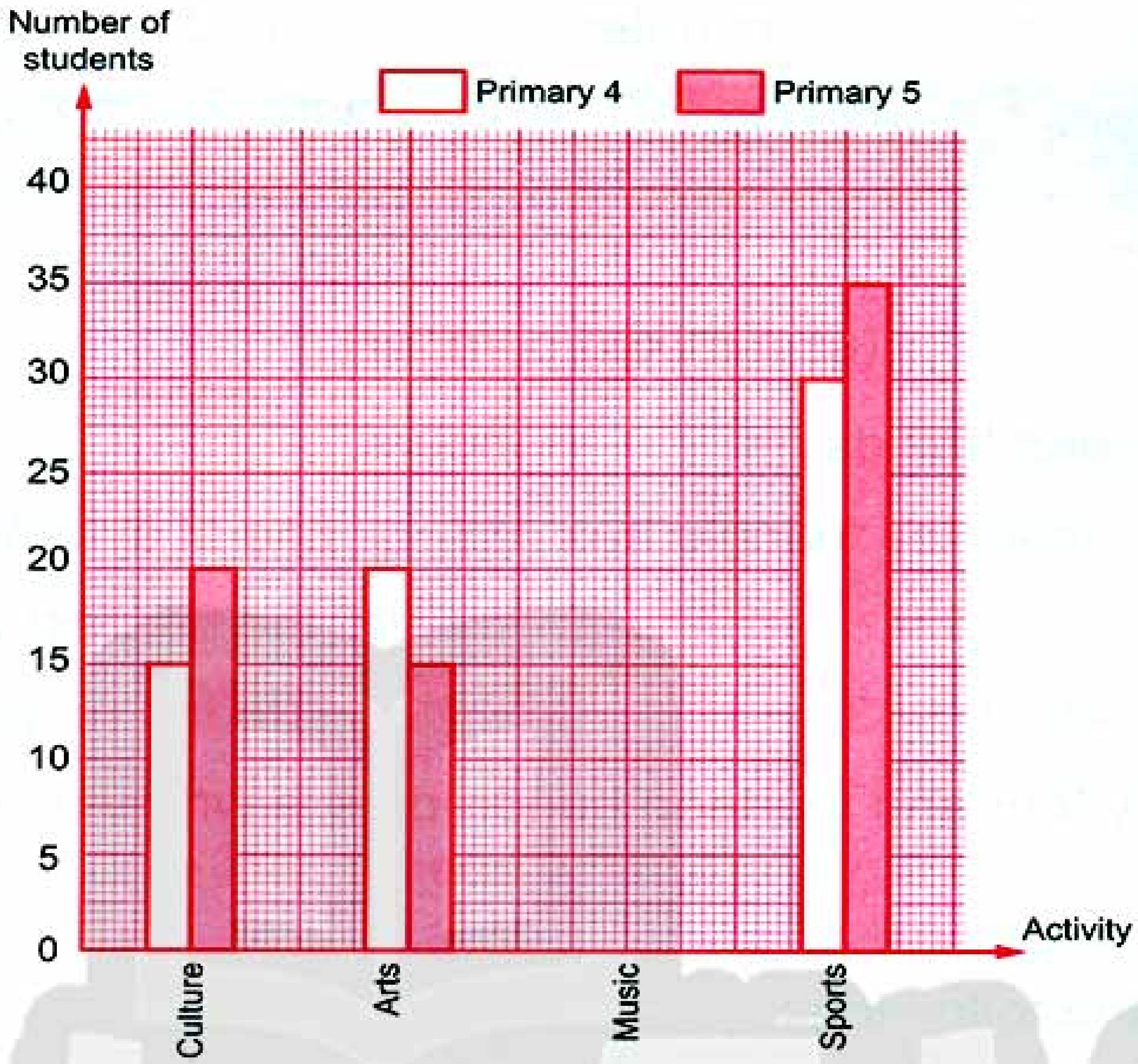
[a] $\overline{AB}$ ≡ .... [b] $\overline{BC}$ ≡ ....

[c] m (∠ X) = m (∠ ....) [d] m (∠ C) = m (∠ ....)

(26) The following table shows the number of students taking part in the activities of a school from both primary 4 and 5 and represented by double bar graph.

Complete the graph and the table :

Grade \ Activity	Culture	Arts	Music	Sports
Primary 4	....	....	10	....
Primary 5	....	....	30	....



9 El-Kalyoubia Governorate
Mathematics Inspection

Answer the following questions :

1 Choose the correct answer :

(1) The probability of the impossible event = ...
(0 or $\frac{1}{2}$ or 1 or 2)

(2) The number of axes of symmetry of the square = ... axes.
(0 or 2 or 3 or 4)

(3) 3.5 tons = ... kg. (35 or 350 or 3 500 or 35 000)

(4) $\frac{17}{5}$ = ... ($2\frac{3}{5}$ or $2\frac{4}{5}$ or $3\frac{1}{5}$ or $3\frac{2}{5}$)

(5) The probability of the appearance of an odd number when tossing a die once = ... ($\frac{1}{3}$ or $\frac{1}{2}$ or $\frac{1}{6}$ or $\frac{3}{4}$)

(6) In a rectangle , the diagonal divides it into two .... triangles.
(congruent or obtuse-angled or equilateral or isosceles)

(7) 3 days = ... hours. (24 or 48 or 72 or 92)

(8) $\frac{1}{4} + \frac{3}{4}$ = ... ($\frac{1}{4}$ or $\frac{1}{2}$ or 1 or $\frac{16}{4}$)

(9) The probability of the appearance of a head when tossing a coin once = ... (0 **or** $\frac{1}{2}$ **or** 1 **or** 2)

(10) $\frac{15}{25}$ = ... ($\frac{1}{3}$ **or** $\frac{2}{5}$ **or** $\frac{3}{5}$ **or** $\frac{5}{3}$)

(11) 3 279 ÷ 100 = ... (32.79 **or** 3.279 **or** 0.3279 **or** 327.9)

(12) 6 475 ≃ .... (to the nearest hundred)
(6 000 **or** 5 600 **or** 6 500 **or** 6 400)

(13) 6 thousandths + 4 hundredths = ...
(0.46 **or** 0.046 **or** 0.64 **or** 0.0064)

(14) The number that is included between 0.73 , 0.744 is ....
(0.745 **or** 0.755 **or** 0.735 **or** 0.725)

(15) 96.43 ☐ $9\frac{648}{1\,000}$ (> **or** < **or** = **or** otherwise)

(16) 7 + 0.3 + ... + 0.006 = 7.356 (5 **or** 0.5 **or** 0.05 **or** 0.005)

2 Complete :

(17) The probability that the sun rises from the east = ...

(18) Two rectangles are congruent if ....

(19) 8 500 mL = ... litres.

(20) $\frac{4}{8} - \frac{1}{4}$ = ...

(21) $4\frac{7}{50}$ = ... (as a decimal number)

(22) 2.6 ≃ .... (to the nearest unit)

3 Answer the following :

(23) Omnia bought a toy for 34.75 pounds and a dress for 26.5 pounds. If she had a banknote of 100 pounds. Find the money left with her.

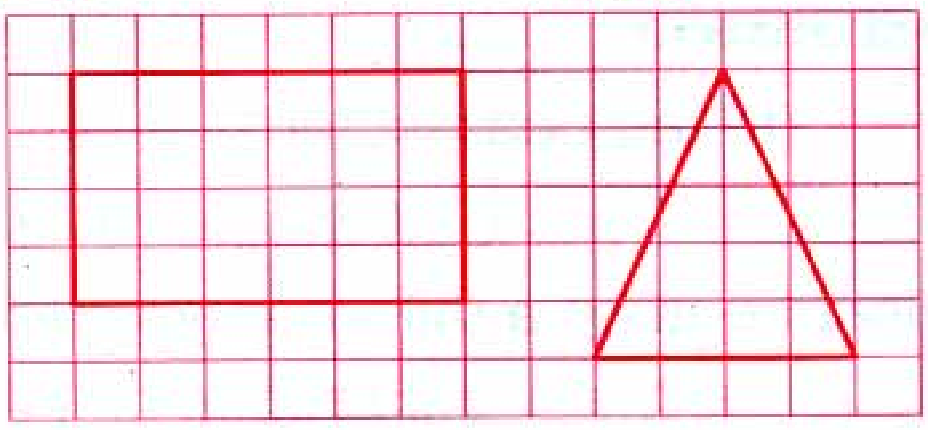
The price of the toy and the dress = ... = ... pounds

The left with her = ... = ... pounds

(24) Find : $\frac{1}{5} + \frac{2}{3}$ = ...

(25) Draw the lines of symmetry of each of the following :

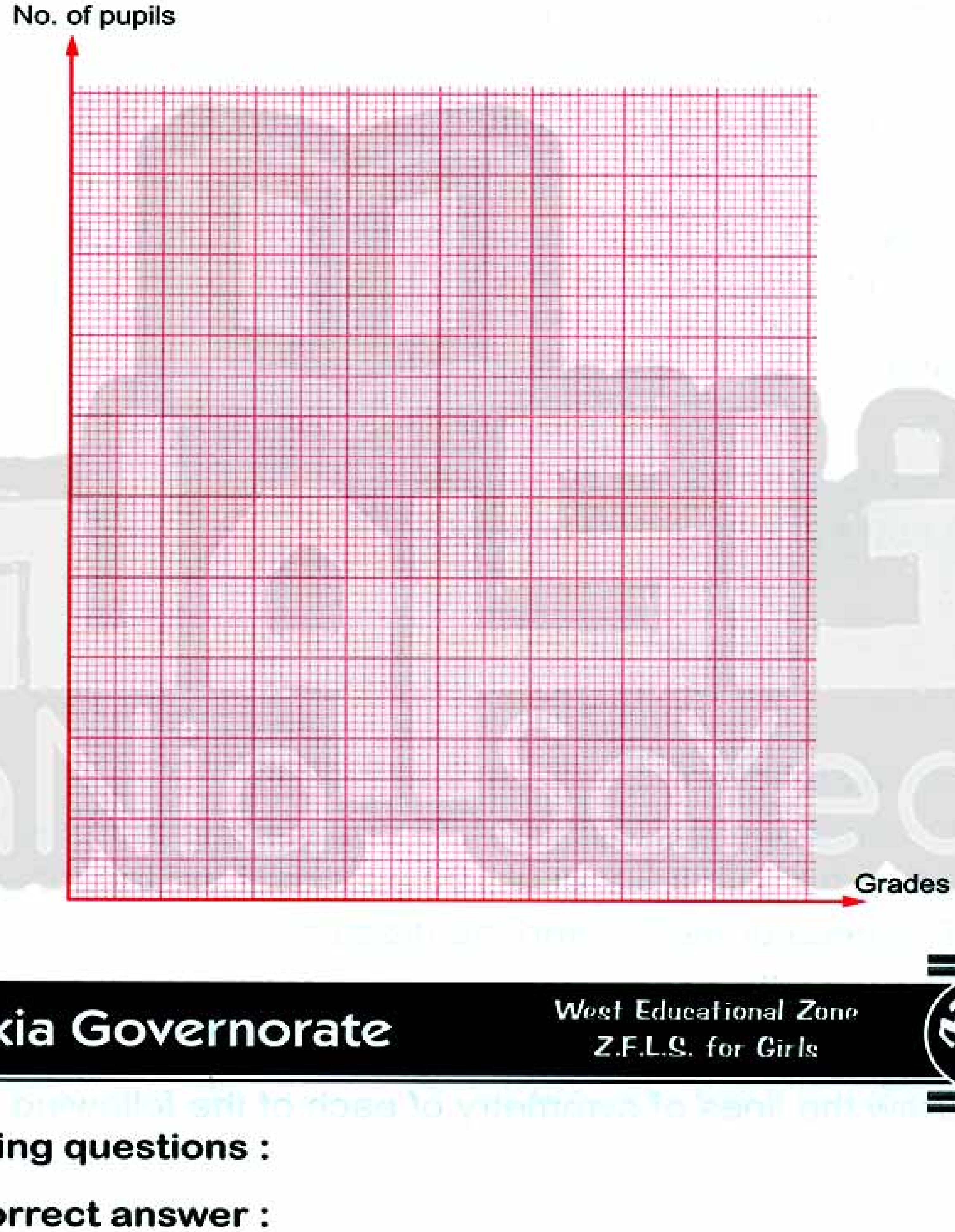
[a] [b]



(26) The following table shows the numbers of pupils in the first four grades in a primary school :

Grades	First	Second	Third	Fourth
Number of pupils	60	80	100	70

Represent these data by a bar line graph.



10 El-Sharkia Governorate

West Educational Zone
Z.F.L.S. for Girls

Answer the following questions :

1 **Choose the correct answer :**

(1) 7 653 ≃ .... (to the nearest ten)

(7 660 *or* 7 600 *or* 7 650 *or* 7 700)

(2) The probability of getting a tail when you flip a coin once is ....

(zero *or* $\frac{1}{2}$ *or* 1 *or* 2)

(3) The rectangle has .... axes of symmetry.
(zero *or* 2 *or* 3 *or* 4)

(4) The value of the digit 9 in the number 0.395 is ....
(9 *or* 90 *or* 0.9 *or* 0.09)

(5) One day = ... hours. (12 *or* 24 *or* 60 *or* 100)

(6) $\frac{5}{3}$ = ... $\frac{\cdots}{\cdots}$ (as a mixed number)
($5\frac{1}{3}$ *or* $3\frac{1}{5}$ *or* $1\frac{1}{3}$ *or* $1\frac{2}{3}$)

(7) 9.71 ≃ .... (to the nearest unit) (9.7 *or* 9.8 *or* 10 *or* 7.9)

(8) .... is one of the measurement units of weight.
(Kilometre *or* Litre *or* Kilogram *or* Hour)

(9) 3 279 ÷ 100 = ... (0.327 *or* 3.279 *or* 32.79 *or* 327.9)

(10) The diagonal of the rectangle divides it into two .... triangles.
(isosceles *or* equilateral *or* congruent *or* obtuse-angled)

(11) The probability of the certain event is ....
(zero *or* 0.5 *or* 1 *or* 2)

(12) 5.7 + 1.44 ☐ 5.7 – 1.44 (> *or* = *or* <)

(13) If the polygon ABCD ≡ the polygon XYZL , then $\overline{AD}$ ≡ ....
($\overline{XY}$ *or* $\overline{YZ}$ *or* $\overline{XL}$ *or* $\overline{XZ}$)

(14) The number of lines of symmetry of the parallelogram = ...
(zero *or* 2 *or* 3 *or* 4)

(15) $\frac{2}{3}$ ☐ $\frac{3}{5}$ (> *or* = *or* <)

(16) $\frac{1}{2}$ litre = ... cm^3 (50 *or* 500 *or* 5 000 *or* 1 000)

2 Complete the following :

(17) $\frac{2}{3} + \frac{1}{6}$ = ...

(18) The two squares are congruent if their sides are .... in length.

(19) One hour and a half = ... minutes.

(20) $2\frac{1}{5} = \frac{\cdots}{\cdots}$ (as an improper fraction)

(21) If Δ XYZ ≡ Δ ABC , then m (∠ Y) = m (∠ ....)

(22) The probability of the impossible event is ....

3 **Answer the following :**

(23) Arrange the following in a descending order :

5.8 , 8.5 , 5.08 and 8.05

The order is : .... , ... , ... and ....

(24) Hala has 98.9 pounds , she bought a shirt for 76.7 pounds.

Calculate the remainder with her.

The remainder = ... = ... pounds.

(25) A box contains 6 black balls , 2 red balls and 3 green balls.

Find the probability of :

[a] Drawing a black ball = ... **[b]** Drawing a green ball = ...

(26) Represent the following data by a bar line graph :

Activity	Sport	Art	Social	Music
Number of pupils	50	30	40	20

11 El-Monofia Governorate

El-Shohadaa Educational Directorate
Mathematics Supervision

Answer the following questions :

1 **Choose the correct answer from those between brackets :**

(1) $8 = \frac{\cdots\cdots}{10}$ (8 *or* 10 *or* 80 *or* 0.8)

(2) Two and five hundredths = ...

(2 500 *or* 2.05 *or* 22.5 *or* 25)

(3) .... is one of the measurement units of length.

(Kilometre *or* Litre *or* Hour *or* Ton)

(4) 0.6 + ... = 1 (4 or 0.4 or 0.3 or 3)

(5) 3 279 ÷ 100 = ... (0.3279 or 3.279 or 32.79 or 327 900)

(6) $\frac{17}{5}$ = ... ($2\frac{3}{5}$ or $2\frac{4}{5}$ or $3\frac{2}{5}$ or $3\frac{1}{5}$)

(7) The number that included between 0.64 , 0.65 is ....
(0.655 or 0.645 or 0.635 or 0.625)

(8) The number of line(s) of symmetry of the isosceles triangle is ....
(1 or 2 or 3 or 4)

(9) In a rectangle , the diagonal divides it into two .... triangles.
(isosceles or equilateral or congruent or acute-angled)

(10) When you flip a coin once the probability of getting a tail is ....
(0 or 0.1 or 0.2 or 0.5)

(11) 6.5 + 2.5 ☐ 12.8 – 3.8 (< or = or >)

(12) $5\frac{3}{4}$ ≃ .... (to the nearest unit) (6 or 5.75 or 5 or 5.8)

(13) If $\Delta ABC \equiv \Delta XYZ$, then AC = ... (XY or XZ or BC or YZ)

(14) $\frac{5}{8}$ hour ☐ $\frac{3}{5}$ hour. (< or = or ≤ or >)

(15) A box contains 8 identical balls , 5 of them are red and 3 are yellow , if a ball is drawn randomly , then probability that drawn ball is red = ...
($\frac{5}{8}$ or $\frac{3}{8}$ or $\frac{1}{4}$ or $\frac{1}{2}$)

(16) The probability of the occurrence of the sure event = ...
(0 or 0.5 or 1 or 2)

2 Complete :

(17) The probability that the sun rises from the west = ...

(18) $\frac{2}{3} + \frac{1}{6}$ = ...

(19) 76.83 ≃ .... (to the nearest tenth)

(20) $\frac{3}{4}$ – 0.5 = ...

(21) Two polygons are congruent if their corresponding sides are .... in length and their corresponding angles are .... in measure.

(22) 35 dm^3 – .... litres = 10 dm^3

3 **Answer the following :**

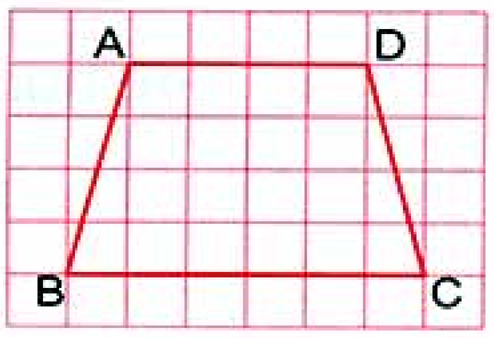
(23) Arrange in an ascending order :

$26\frac{1}{4}$ L , 9 000 mL , 5 L and 6 500 mL

The order is : .... , ... , ... and ....

(24) Find : 75 – 67.3 = ... ≃ .... (to the nearest ten)

(25) In the opposite figure :



[a] What is the name of the figure ABCD ?

....

[b] How many lines of symmetry for this figure ?

....

(26) The following table shows the number of absent pupils from the 4th grade and the 5th grade in a school within 4 days :

Grade \ Day	1st	2nd	3rd	4th
Fourth	8	7	6	5
Fifth	6	4	8	5

Represent these data by double bars.

12 El-Gharbia Governorate

El-Gharbia Educational Directorate
Mathematics Supervision

Answer the following questions :

1 Choose the correct answer :

(1) 3 600 piastres = ... pounds. (360 *or* 36 *or* 3 600 *or* 3.6)

(2) 7 units , 5 thousands = ... (5 007 *or* 7.005 *or* 7.5 *or* 7.05)

(3) The probability of the sure event = ...

(1 *or* 2 *or* 0.5 *or* 0)

(4) $\frac{17}{5}$ = ... ($2\frac{3}{5}$ *or* $2\frac{4}{5}$ *or* $3\frac{1}{5}$ *or* $3\frac{2}{5}$)

(5) 6 475 ≃ .... (to the nearest hundred)

(6 000 *or* 5 600 *or* 6 500 *or* 6 080)

(6) 4 750 kg. = ... tons ($4\frac{3}{4}$ *or* 475 *or* 0.475 *or* 47 500)

(7) 56.1 ÷ 100 = ... (561 *or* 0.561 *or* 5.61 *or* 5 610)

(8) Two days and half of day = ... hours (72 *or* 48 *or* 60 *or* 30)

(9) In a rectangle , the diagonal divides it into two .... triangles.

(congruent *or* acute-angled *or* isosceles *or* equilateral)

(10) The number included between 0.64 and 0.65 is ....

(0.655 *or* 0.645 *or* 0.635 *or* 0.625)

(11) The value of the digit 7 in the number 0.375 is ....

(70 *or* 7 *or* 0.7 *or* 0.07)

(12) $204\frac{3}{5}$ ≃ .... (to the nearest whole number)

(203 *or* 204 *or* 205 *or* 405)

(13) $\frac{4}{8} - \frac{1}{4} = \frac{\dots}{\dots}$ ($\frac{3}{4}$ *or* $\frac{1}{4}$ *or* $\frac{3}{8}$ *or* $\frac{5}{8}$)

(14) 251 056 ≃ 251 100 (to the nearest ....)

(10 000 *or* 1 000 *or* 100 *or* 10)

(15) 3 500 millilitres = ... litres. (350 *or* 35 *or* $3\frac{1}{2}$ *or* 0.35)

(16) 52.43 – 2.731 ≃ .... (to the nearest one decimal place)

(49.699 *or* 49.7 *or* 94.7 *or* 50)

2 Complete :

(1) Two squares are congruent if ....

(2) 1 hour = ... minutes = ... seconds.

(3) The probability of the appearance of getting a head when tossing a coin once = ...

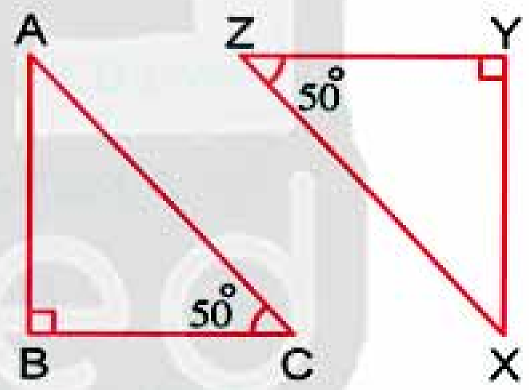
(4) 1 gm. = ... kg.

(5) $7\frac{1}{3}$ = ... (as an improper fraction)

(6) The place value of the digit 9 in the number 130.974 is ....

3 Answer the following :

(1) In the opposite figure :



If Δ ABC ≡ Δ XYZ , complete :

[a] $\overline{AB}$ ≡ ....

[b] $\overline{CA}$ ≡ ....

[c] m (∠ X) = m ∠ (..................) = ...°

(2) A box contains 4 red balls , 5 white balls and 3 blue balls , a ball is drawn at random , find :

[a] The probability that the ball is red = ...

[b] The probability that the ball is green = ...

(3) Mai bought a group of notebooks for 65.75 pounds and a book for 17.5 pounds , how much money did she pay ?

....

(4) The following table shows the number of travellers in the first four carriages of a train :

Carriages	First	Second	Third	Fourth
Number of travellers	60	55	70	65

Represent these data by a bar line graph.

13 El-Dakahlia Governorate

Maths Supervision

Answer the following questions :

1 Complete the following :

(1) $\frac{5}{8} - \frac{1}{4} =$ ....

(2) 6 475 ≃ .... (to the nearest hundred)

(3) Number of lines of symmetry of the equilateral triangle = ...

(4) $\frac{3}{4}$ hour = ... minutes.

(5) The probability of appearance of a head when tossing a coin once = ...

(6) 52.46 – 2.731 = ...

2 **Choose the correct answer :**

(1) $4\frac{3}{100}$ = ... (4.3 or 4.03 or 4.003 or 3.04)

(2) $\frac{2}{5} + \frac{3}{5}$ = ... ($\frac{1}{5}$ or $\frac{2}{5}$ or $\frac{5}{10}$ or 1)

(3) The number that included between 0.73 , 0.744 is ....
(0.745 or 0.755 or 0.735 or 0.725)

(4) 46 235 ÷ 1 000 ≃ .... (to the nearest unit)
(46.24 or 46.2 or 462.35 or 46)

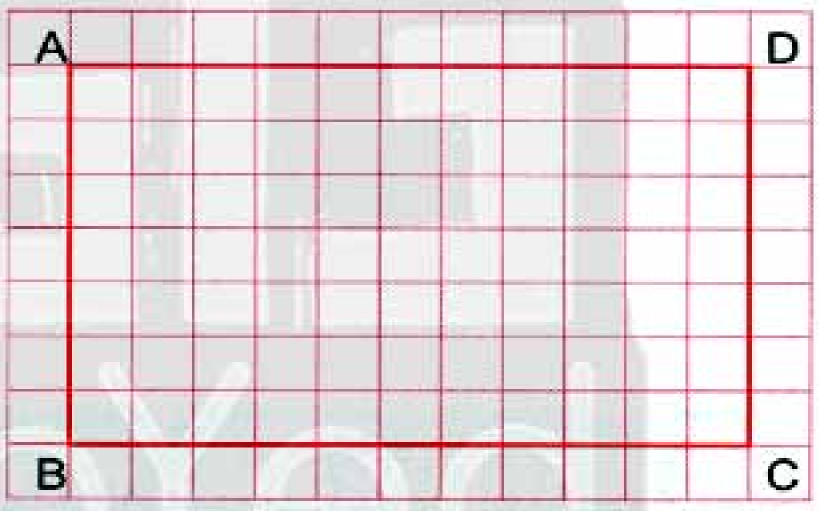
(5) 3.5 tons = ... kg. (35 or 350 or 3 500 or 35 000)

(6) In a rectangle, the diagonal divides it into two .... triangles.
(congruent or acute-angled or equilateral or isosceles)

(7) The probability of the impossible event = ...
(0 or $\frac{1}{2}$ or 1 or 2)

(8) $\frac{5}{10}$ + 0.6 = ... (11 or 0.11 or 1.1 or 0.1)

3 **[a]** **In the opposite figure :**



(1) How many lines of symmetry for this figure ? ....

(2) Draw a line divides this figure into two congruent figures.

[b] If the distance between two cities is 4 625 metres, approximate this distance to the nearest kilometre.

....

4 **Choose the correct answer :**

(1) 5 litres = ... dm^3. (5 or 500 or 5 000 or 0.005)

(2) The probability that the sun rises from the east = ...
(0 or $\frac{1}{2}$ or $\frac{1}{4}$ or 1)

(3) $4\frac{7}{50}$ = ... (as a decimal number)
(4.7 or 50.4 or 4.14 or 4.07)

(4) $\frac{17}{5}$ = ... ($2\frac{3}{5}$ or $2\frac{4}{5}$ or $3\frac{1}{5}$ or $3\frac{2}{5}$)

(5) The value of the digit 7 in the number 0.375 is ....
(70 or 7 or 0.7 or 0.07)

(6) 567.47 ≃ .... (to the nearest tenth)

(567.4 **or** 567.7 **or** 567.5 **or** 570)

(7) The number of lines of symmetry of a square = ...

(1 **or** 2 **or** 3 **or** 4)

(8) 7 units , 5 thousandths = ...

(5.7 **or** 7.5 **or** 7.005 **or** 5.007)

5 **[a]** Mazen has 35 pounds, he bought a ball for 12.75 pounds and a book for 17.25 pounds. What is the remainder with him ?

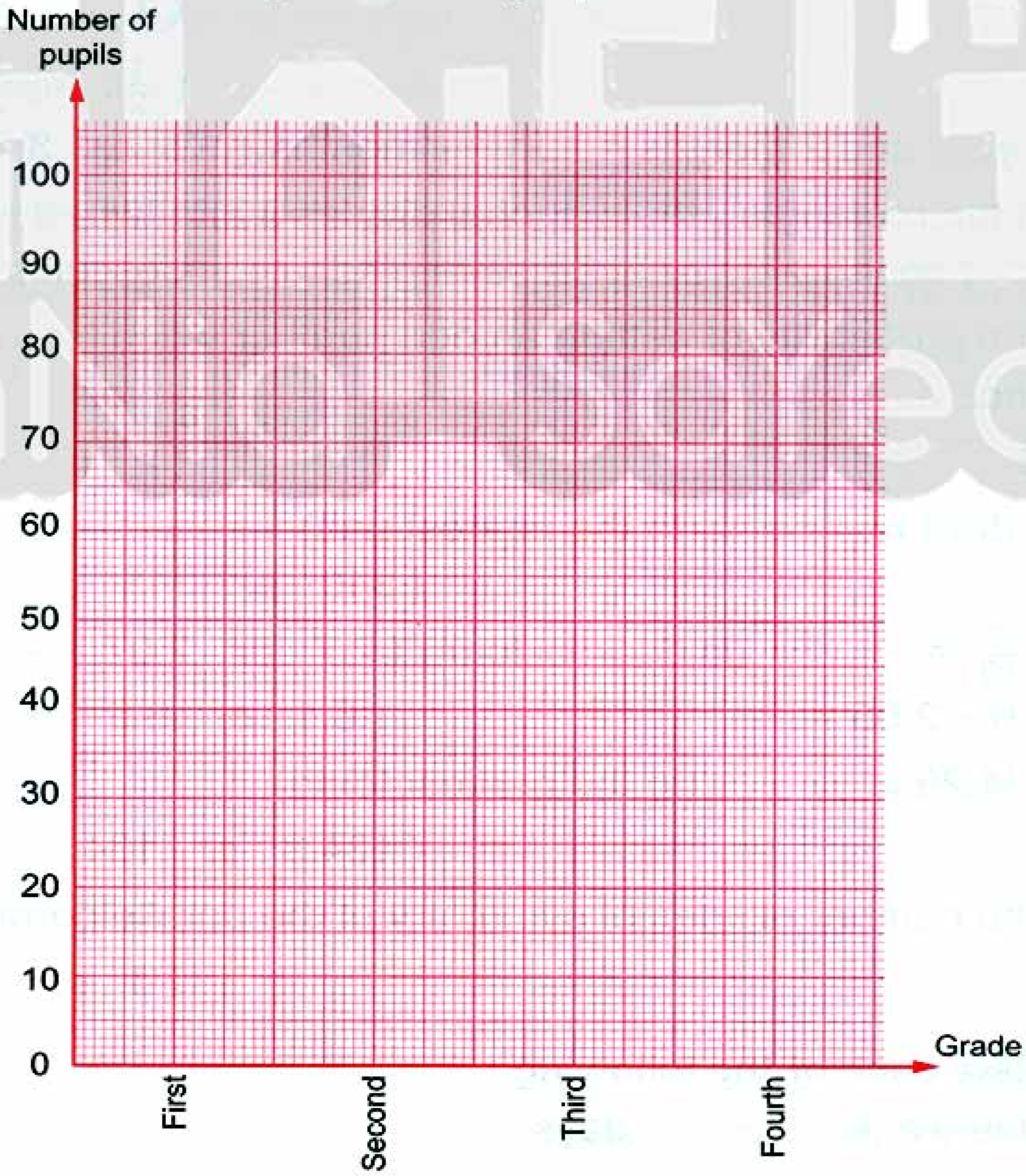
....

....

[b] The following table shows the number of pupils in the first four grades in a primary school :

Grade	First	Second	Third	Fourth
Number of pupils	60	80	100	70

Represent these data by a bar line graph.



14 Ismailia Governorate

Mathematics Inspection

Answer the following questions :

1 Choose the correct answer :

(1) 4 tons = ... kg. (0.004 or 40 or 4 000 or 4)

(2) The square has .... axes of symmetry. (4 or 3 or 2 or 0)

(3) The value of the digit 9 in the number 0.976 is ....
(90 or 0.9 or 9 or 0.09)

(4) The probability of the certain event is ....
(0 or 0.5 or 1 or 2)

(5) 5 734 ÷ 100 = ... (5.734 or 57.34 or 573.4 or 0.5734)

(6) The probability of getting a tail when tossing a coin once is ....
(1 or 0 or $\frac{2}{3}$ or $\frac{1}{2}$)

(7) $3\frac{1}{2}$ = ... ($\frac{1}{2}$ or $\frac{7}{2}$ or $\frac{3}{2}$ or $\frac{2}{3}$)

(8) 1 year and 2 months = ... months. (12 or 3 or 21 or 14)

(9) In the rectangle , the diagonal divides it into two .... triangles.
(congruent or obtuse-angled or isosceles or equilateral)

(10) The probability of getting an odd number when tossing a die once = ... ($\frac{1}{6}$ or $\frac{3}{4}$ or $\frac{1}{3}$ or $\frac{1}{2}$)

(11) $\frac{3}{7}$ ☐ $\frac{5}{7}$ (> or < or = or ≃)

(12) 345.71 ≃ .... (to the nearest unit)
(340 or 345 or 346 or 345.7)

(13) $2\frac{7}{10}$ = ... (in decimal form) (2.7 or 2.07 or 2.007 or 7.2)

(14) 3.6 + 2.05 = ... (6.1 or 6.5 or 5.15 or 5.65)

(15) 134.29 ≃ .... (to the nearest tenth)
(134.3 or 134 or 130 or 100)

(16) The number of lines of symmetry of the parallelogram is ....
(4 or 0 or 2 or 3)

2 Complete each of the following :

(17) One week = ... days.

(18) $1 - 0.6 =$ ....

(19) The probability of the impossible event is ....

(20) $2\,467 \simeq 2\,470$ (to the nearest ....)

(21) If $\Delta ABC \equiv \Delta XYZ$, then AB = ...

(22) $\frac{5}{11} + \frac{3}{11} =$ ....

3 Answer the following :

(23) Arrange in an ascending order : 5.8 , 5.08 , 58 and 8.5

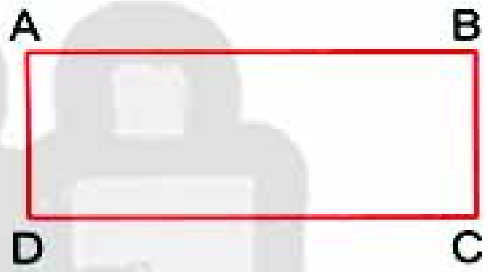
The order is : .... , ... , ... and ....

(24) Ali has 78.5 pounds, he bought a toy for 36.25 pounds.

What is the remainder ?

The remainder = ... = ... pounds.

(25) In the opposite figure :

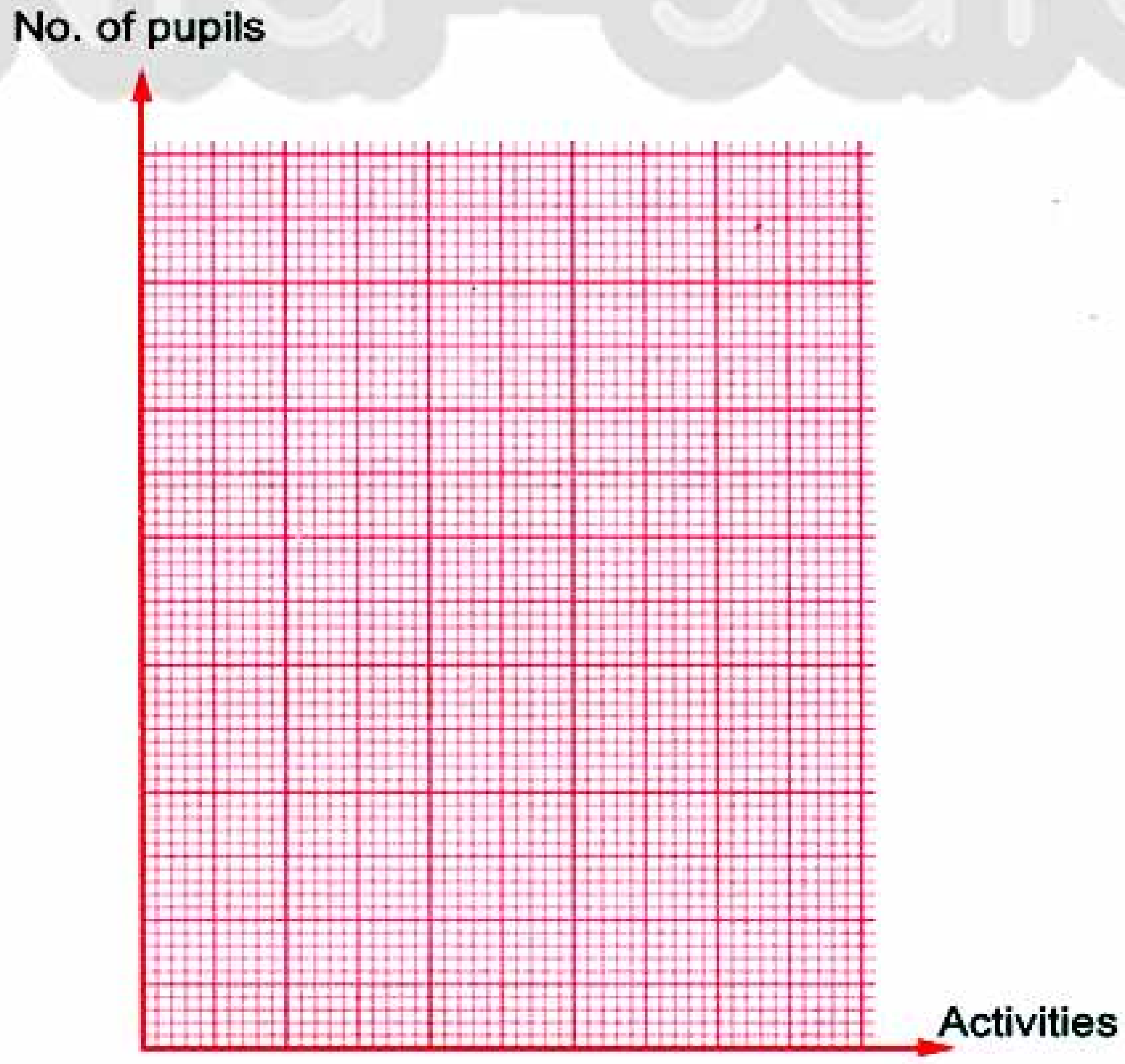


[a] What is the name of the figure ABCD ? ....

[b] How many lines of symmetry does this figure have ? ....

(26) Represent these data by a bar line graph.

Activities	Art	Social	Sports	Cultural
No. of pupils	20	15	30	5



15 Suez Governorate

Maths Supervision

Answer the following questions :

1 Choose the correct answer from those between brackets :

(1) $\frac{2}{5} + \frac{3}{7} =$ .... ($\frac{5}{12}$ or $\frac{29}{35}$ or $\frac{6}{35}$)

(2) $8\frac{4}{5} =$ .... (8.4 or 8.8 or 8.5)

(3) 518 ÷ 10 = ... (51.8 or 5.18 or 518)

(4) 6.8 = 0.8 + ... (6 or 0.6 or 0)

(5) $\frac{18}{4} =$ .... ($4\frac{1}{2}$ or $4\frac{2}{3}$ or $4\frac{3}{5}$)

(6) 29.095 ≃ .... (to the nearest tenth) (29.1 or 30 or 29.11)

(7) The place value of the digit (4) in the number 8.4 is ....
(units or tens or tenths)

(8) The number of line(s) of symmetry of the rectangle is ....
(zero or 4 or 2)

(9) $457\frac{1}{5} \simeq$ .... (to the nearest whole number)
(457 or 458 or 455)

(10) The square has .... lines of symmetry. (2 or 4 or 6)

(11) The weight of the book which I carry is ....
(3 tons or 300 gm. or 3 kg.)

(12) 48 hours = ... (3 days or two days or 4 days)

(13) Five and seven tenths = ... (5.7 or 7.5 or 0.75)

(14) The sun rieses from the West is .... event.
(a certain or a possible or an impossible)

2 Complete :

(1) $\frac{\cdots\cdots}{16} = \frac{3}{4}$

(2) 775 × 100 = ...

(3) 2 tons = ... kg.

(4) Forty-six thousndths = ... (in digits)

(5) 0.2 + ... = 1

(6) 1 kg. = ... gm.

(7) 750 000 millilitres = ... litres.

(8) A square of side length 9 cm. is congruent to another square of perimeter .... cm.

3 **Answer the following :**

(1) Arrange the following numbers ascendingly :

0.45 , 5.4 , 4.5 and 0.54

The order is : .... , ... , ... and ....

(2) Mazen has 35 pounds. He bought a ball for 9.75 pounds and a book for 5.25 pounds. How much money was left with him ?

The price of the ball and the book = ... + ... = ... pounds.

The money left with him = ... – .... = ... pounds.

16 Port Said Governorate

Maths Inspection

Answer the following questions :

1 **Choose the correct answer :**

(1) 3 tons = ... kg. (3 or 30 or 300 or 3 000)

(2) 5 678 ≃ .... (to the nearest ten)

(5 670 or 5 690 or 5 680 or 5 700)

(3) Number of lines of symmetry of the isosceles triangle = ...

(0 or 1 or 2 or 3)

(4) 8 079 ≃ 8 000 (to the nearest ....)

(10 000 or 1 000 or 100 or 10)

(5) In a rectangle , the diagonal divides it into two .... triangles.

(congruent or acute-angled or isosceles or equilateral)

(6) One day = ... hours (24 or 48 or 72 or 96)

(7) The probability of sure event = ... (0 or 0.5 or 1 or 2)

(8) The number of lines of symmetry of the square = ...

(1 or 2 or 3 or 4)

(9) If a coin is tossed once , the probability of getting a head = ...

(0 or $\frac{1}{2}$ or 1 or 2)

(10) The value of the digit 7 in the number 0.375 is ....

(7 or 70 or 0.07 or 0.7)

(11) The number included between 0.64 and 0.65 is ....

(0.655 or 0.645 or 0.635 or 0.625)

(12) $\frac{7}{20}$ ☐ $\frac{17}{20}$ (> or = or < or ≃)

(13) $3\frac{5}{10}$ = ... (3.05 or 3.5 or 5.03 or 5.3)

(14) $\frac{15}{25}$ = ... ($\frac{1}{3}$ or $\frac{2}{5}$ or $\frac{3}{5}$ or $\frac{5}{3}$)

(15) 3 units , 5 thousandths = ...

(3.5 or 3.05 or 3.005 or 5.003)

(16) The probability of appearing an even number when rolling a fair die once = ... ($\frac{1}{6}$ or $\frac{2}{6}$ or $\frac{3}{4}$ or $\frac{1}{2}$)

2 Complete the following :

(1) 9 754 ≃ .... (to the nearest hundred)

(2) The probability of impossible event = ...

(3) $\frac{1}{3}$ + $\frac{2}{3}$ = ... = ...

(4) The two rectangles are congruent if the two dimensions of one of them are .... to the two dimensions of the other.

(5) $5\frac{1}{4}$ = ... (in decimal form)

(6) 1 litre = ... cm^3

3 Answer the following :

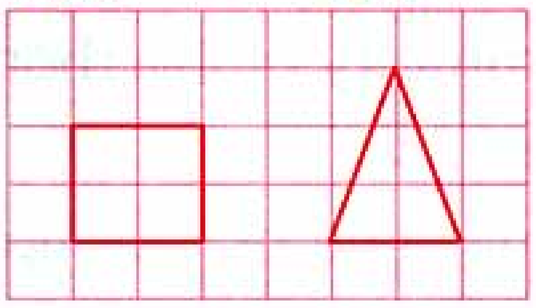
(1) Find :

[a] 36.48 – 18.37 = ... ≃ .... (to the nearest tenth)

[b] 46 235 ÷ 1 000 = ... ≃ .... (to the nearest unit)

(2) Draw a line of symmetry of each figure :

[a] [b]



(3) Arrange the following in an ascending order :

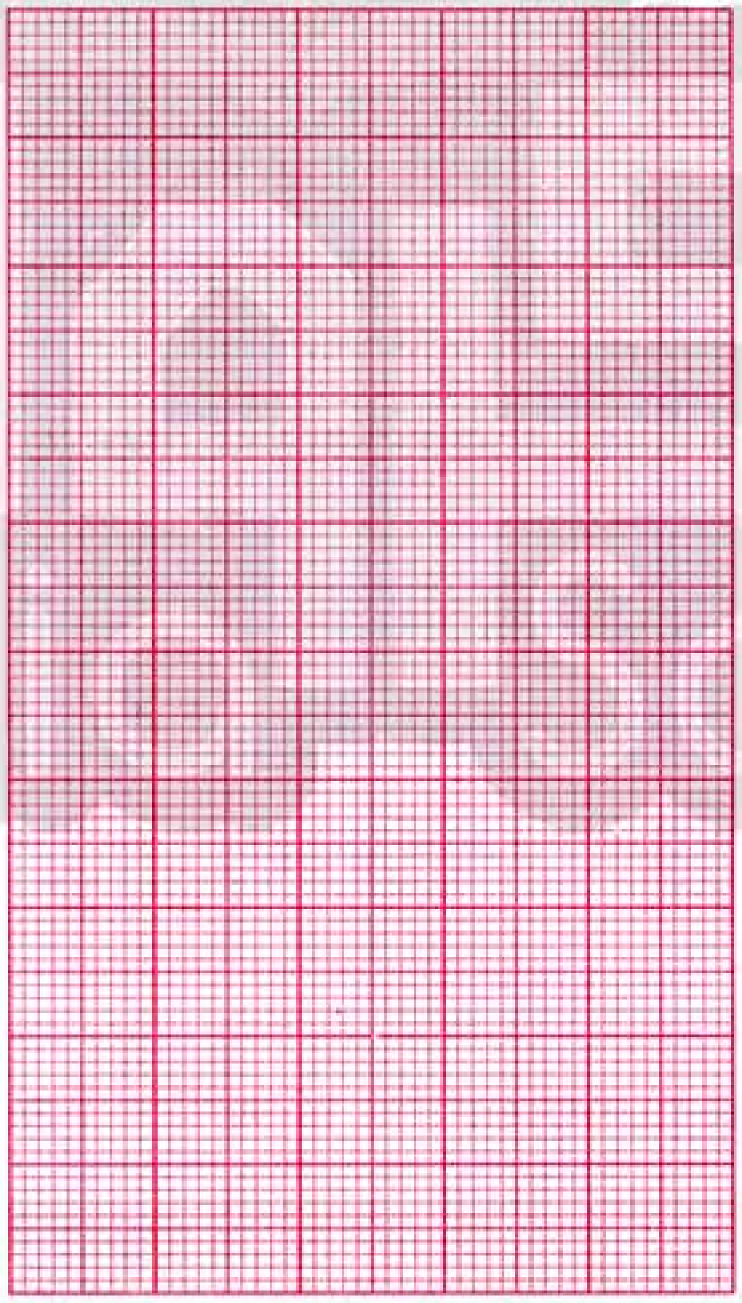
5.8 , 5.08 , 8.5 and 8.05

The order is : .... , ... , ... and ....

(4) The following table shows the number of pupils for the first four grades in a primary school :

Grade	First	Second	Third	Fourth
Number of pupils	60	70	80	100

Represent these data by a bar line graph.



17 Damietta Governorate

Mathematics Supervision

Answer the following questions :

1 Choose the correct answer :

(1) 9 + 0.4 + 0.007 = ... (9.74 *or* 9.47 *or* 9.047 *or* 9.407)

(2) The value of the digit 3 in the number 1.236 is ....
(30 or 3 or 0.3 or 0.03)

(3) Number of lines of symmetry of the rhombus = ...
(1 or 2 or 3 or 4)

(4) The probability of occurrence of the impossible event = ...
(0 or $\frac{1}{2}$ or 1 or 2)

(5) 78 ÷ 1 000 = ... (7.8 or 0.78 or 0.078 or 78 000)

(6) $3\frac{1}{2}$ kg. = ... gm. (3.5 or 350 or 3 200 or 3 500)

(7) The probability of getting a prime number when tossing a die once = ... ($\frac{1}{6}$ or $\frac{2}{6}$ or $\frac{1}{2}$ or $\frac{3}{4}$)

(8) $3\frac{5}{100}$ ☐ 3.5 (> or < or = or ≃)

(9) $7\frac{4}{5}$ = ... (7.4 or 7.8 or 7.54 or 8.7)

(10) In a rectangle, the diagonal divides it into two .... triangles.
(congruent or acute-angled or equilateral or isosceles)

(11) $\frac{7}{10}$ + 0.6 = ... (7.6 or 0.76 or 0.13 or 1.3)

(12) A box contains 5 red balls, if one ball is drawn, then the probability of the drawn ball is red = ... (0 or $\frac{1}{5}$ or $\frac{2}{5}$ or 1)

(13) 3.25 m. ≃ .... m. (to the nearest metre)
(3.25 or 3.3 or 3 or 4)

(14) If Δ DEF ≡ Δ XYZ, then EF = ...
(XY or XZ or YX or YZ)

(15) $7\frac{1}{3}$ = ... ($\frac{22}{3}$ or $\frac{8}{3}$ or $\frac{10}{3}$ or $\frac{3}{22}$)

(16) 2 litres = ... cm^3. (2 or 20 or 2 000 or 200)

2 Complete the following :

(1) Sixty-five and eight hundredths is written as ....

(2) $\frac{2}{3} - \frac{1}{4}$ = ...

(3) A square whose side length is 5 cm. is congruent to a square of perimeter .... cm.

(4) 3 hours = ... minutes.

(5) 31.562 ≃ .... (to the nearest tenth)

(6) The probability of appearance of a head when tossing a coin once = ...

3 **Answer the following :**

(1) Ahmed bought a pen for L.E. 3.75 and a ruler for L.E. 2.5 , how much did he pay ?

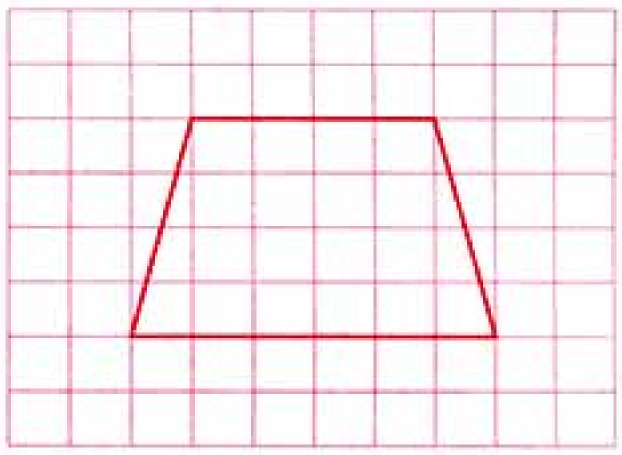
He paid = ... = L.E. ....

(2) Arrange the following in an ascending order :

$\frac{3}{8}$, 1 , $\frac{1}{2}$ and $\frac{3}{4}$

The order is : .... , ... , ... and ....

(3) **In the opposite figure :**



[a] What is the name of the figure ? ....

[b] Draw the line(s) of symmetry for this figure.

(4) Represent these data by a bar line graph.

Activities	Sports	Art	Culture
Numbers of children	40	50	60

18 Kafr El-Sheikh Governorate

General Math Supervision

Answer the following questions :

1 **Choose the correct answer from those between the brackets :**

(1) The value of the digit 7 in the number 0.375 is ....

(0.07 *or* 0.7 *or* 7 *or* 70)

(2) 7 + 0.3 = …………… (73 or 37 or 3.7 or 7.3)

(3) The number of axes of symmetry of a square = …………… (0 or 2 or 3 or 4)

(4) 3 days = …………… hours. (24 or 48 or 72 or 92)

(5) The probability of the occurrence of getting an even number when tossing a die once = …………… ($\frac{1}{6}$ or $\frac{2}{6}$ or $\frac{3}{4}$ or $\frac{1}{2}$)

(6) $657\frac{4}{5} \simeq$ …………… (to the nearest unit) (657 or 658 or 655 or 659)

(7) …………… is one of the units of measuring length. (Kilometre or Kilogram or Ton)

(8) 42 819 ÷ 100 ≃ …………… (to the nearest 10) (42.8 or 430 or 420 or 428.19)

(9) 5 litres = …………… dm^3. (5 or 5 000 or 500 or 0.5)

(10) $\frac{3}{25}$ ☐ 0.2 (> or < or = or otherwise)

(11) 750 grams ☐ $\frac{1}{2}$ kg. (> or < or = or otherwise)

(12) The rhombus has …………… lines of symmetry. (0 or 1 or 2 or 3)

(13) The probability of appearing a head when tossing a coin once is …………… (1 or 0.5 or zero or 2)

(14) $5\frac{7}{20}$ = …………… (572 or 5.720 or 5.14 or 5.35)

(15) If Δ ABC ≡ Δ XYZ , then AC = …………… (AB or XY or XZ or YZ)

(16) 567.47 ≃ …………… (to the nearest tenth) (567.4 or 567.7 or 567.5 or 567.3)

2 Complete the following :

(17) The probability of the impossible event = ……………

(18) $0.8 + \frac{3}{10}$ = ……………

(19) 362.6 – 29.1 = …………… ≃ …………… (to the nearest unit)

(20) The number of lines of symmetry of the equilateral triangle = ……………

(21) $\frac{3}{5} + \frac{1}{4}$ = ……………

(22) 48 hours = …………… days.

3 **Answer the following :**

(23) Omnia bought a group of toys for 34.75 pounds and dress for 26.3 pounds. If she had a banknote paper of 100 pounds , find the money left with her.

....

....

(24) A box has 2 blue balls , 3 red balls and 4 green balls. A ball is selected at random , find the probability of the selected ball is :

[a] Red = ... **[b]** Not green = ...

(25) Arrange the following in an ascending order :

5.8 , 5.08 , 8.5 and 8.05

The order is : .... , ... , ... and ....

(26) The following table shows the money of Ahmed and Ali in pounds within 4 successive weeks :

Week / Name	First	Second	Third	Fourth
Ahmed	8	3	5	10
Ali	9	7	4	6

Represent these data by double bars.

19 El-Fayoum Governorate

West Educational Zone
Maths Inspection

Answer the following questions :

1 **Choose the correct answer :**

(1) 0.25 + 0.5 + ... = 1 (0.75 *or* $\frac{1}{2}$ *or* 0.15 *or* $\frac{1}{4}$)

(2) The probability of appearing of a prime number on the upper face of a die = …………… ($\frac{1}{6}$ or $\frac{2}{6}$ or $\frac{3}{4}$ or $\frac{1}{2}$)

(3) 6 tens , 5 tenths = …………… (50.6 or 6.50 or 60.5 or 60.05)

(4) $3\frac{2}{5}$ = …………… ($\frac{15}{5}$ or $\frac{32}{5}$ or $\frac{13}{5}$ or $\frac{17}{5}$)

(5) The decimal included between 0.15 and 0.2 is …………… (0.11 or 0.17 or 0.1 or 0.21)

(6) The number of lines of symmetry of the rectangle is …………… (1 or zero or 2 or 3)

(7) 4.35 = 4.3 + …………… (5 or 0.5 or 0.05 or 0.005)

(8) 3 500 grams = …………… kilograms (3 or $3\frac{1}{2}$ or $3\frac{1}{4}$ or 35)

(9) $\frac{1}{2} + \frac{1}{3} + \frac{1}{6}$ = …………… ($\frac{3}{11}$ or $\frac{2}{3}$ or 1 or $\frac{5}{6}$)

(10) The probability of impossible event = …………… (1 or 0 or $\frac{1}{2}$ or $\frac{1}{6}$)

(11) The litre is the capacity of a cube of side length …………… cm. (20 or 1 or 10 or 5)

(12) 756.85 ≃ …………… (to the nearest ten) (756.9 or 760 or 757 or 750)

(13) The sum of probabilities of all possible outcomes = …………… (zero or one or half or quarter)

(14) If the figure ABCD ≡ figure XYZL , then $\overline{AD}$ ≡ …………… ($\overline{XY}$ or $\overline{ZY}$ or $\overline{XL}$ or $\overline{LY}$)

(15) If Δ ABC ≡ Δ DEF , m (∠ B) = 50° , then m (∠ ……………) = 50° (D or F or E)

(16) 6.9 + 2.1 ☐ 11.7 – 1.7 (< or = or > or ≃)

2 Complete the following :

(17) The two polygons are congruent if their corresponding …………… are equal in length and their corresponding …………… are equal in measure.

(18) $\frac{15}{20} = \frac{\cdots\cdots}{4}$

(19) 8 000 millilitres = …………… litres.

(20) A box contains 5 blue balls , 2 red balls and 3 green balls. If a ball is drawn blindly , then the probability that the ball is green = ……………

(21) $11.53 + 6.25 =$ .... $\simeq$ .... (to the nearest unit)

(22) $55 - 32.62 =$ .... $\simeq$ .... $\left(\text{to the nearest } \frac{1}{10}\right)$

3 Answer the following :

(23) Arrange the following in an ascending order :

$7.3 \quad , \quad 8\frac{1}{2} \quad , \quad 8.125 \quad , \quad 7.12 \quad \text{and} \quad 8\frac{1}{4}$

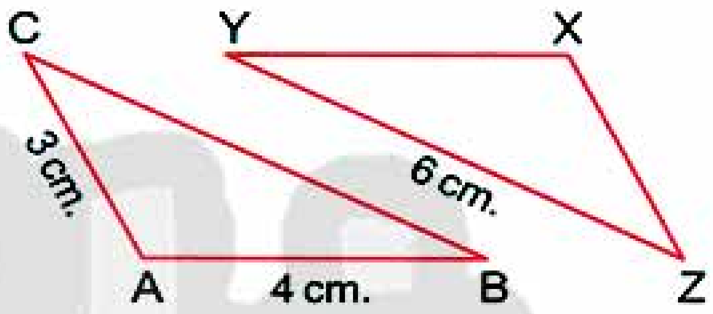
The order is : .... , ... , ... , ... and ....

(24) Youssef has 98.5 pounds. He bought a shirt for 65.25 pounds. Calculate the remainder with him.

The remainder = ...

(25) **In the opposite figure :**

If Δ ABC $\equiv \Delta$ XYZ , complete :



[a] XZ = ... cm.

[b] XY = ... cm.

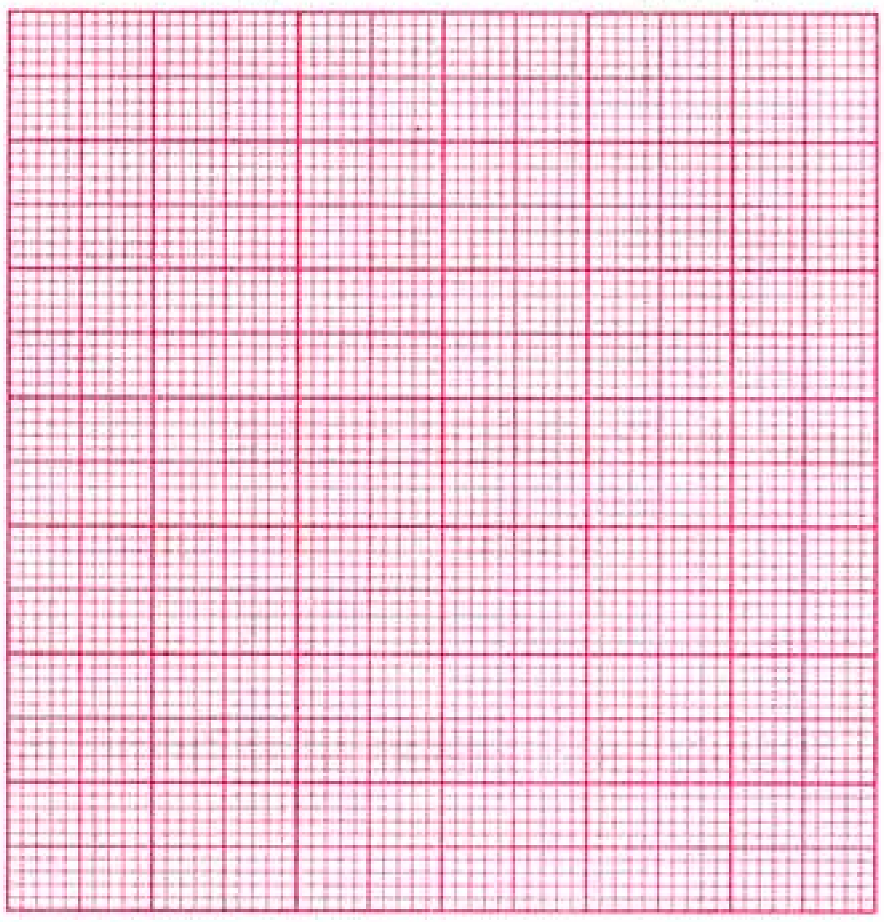
[c] $\angle A \equiv \angle$ ....

[d] The perimeter of Δ ABC = ... cm.

(26) The table below represents the number of students from primary four and primary five in three activities :

Activity / Class	Cultural	Arts	Sports
Primary four	15	25	20
Primary five	20	20	30

Represent these data by double bars graph.



20 El-Menia Governorate

Directorate of Education
Minia Kawmia Language School

Answer the following questions :

1 Choose the correct answer :

(1) 3 hours = ... minutes. (30 or 60 or 90 or 180)

(2) 6 thousandths and 4 hundredths = ...
(0.46 or 0.046 or 0.64 or 0.0064)

(3) The number that included between 0.64 and 0.65 is ....
(0.655 or 0.645 or 0.635 or 0.625)

(4) Number of lines of symmetry for the square = ...
(2 or 4 or 3 or 6)

(5) 8 731 ≃ .... (to the nearest thousand)
(800 or 8 000 or 900 or 9 000)

(6) The value of the digit 7 in the number 0.375 is ....
(70 or 7 or 0.7 or 0.07)

(7) $\frac{15}{25}$ = ... ($\frac{1}{3}$ or $\frac{2}{5}$ or $\frac{3}{5}$ or $\frac{5}{3}$)

(8) 48 hours = ... days. (1 or 2 or 3 or 4)

(9) In a rectangle , the diagonal divides it into two .... triangles.
(congruent or acute-angled or isosceles or equilateral)

(10) $\frac{17}{5}$ = ... ($2\frac{3}{5}$ or $2\frac{4}{5}$ or $3\frac{1}{5}$ or $3\frac{2}{5}$)

(11) The probability of the impossible event = ...
(0 or $\frac{1}{2}$ or 1 or 2)

(12) 3.5 tons = ... kg. (35 or 350 or 3 500 or 35 000)

(13) $9\frac{7}{10}$ = ... (9.07 or 9.7 or 9.007 or 7.09)

(14) 567.47 ≃ .... (to the nearest tenth)
(567.4 or 567.7 or 567.5 or 567.3)

(15) $\frac{1}{2}$ litre = ... cm^3. (5 or 50 or 500 or 5 000)

(16) The probability of the appearance of a head when tossing a coin once = ... (0 or $\frac{1}{2}$ or 1 or 2)

2 Complete the following :

(17) A square of side length 5 cm. is congruent to ....

(18) $7\frac{3}{5}$ = ... (in the decimal form)

(19) 52.46 – 2.731 = ... ≃ .... (to the nearest unit)

(20) Number of lines of symmetry of the equilateral triangle = ...

(21) $0.8 - \frac{3}{10}$ = ...

(22) 20 millilitres = ... litres.

3 Answer the following :

(23) A box contains 5 identical balls , 2 of them are blue , the others are green. A ball is drawn at random , find the probability that the ball is green.

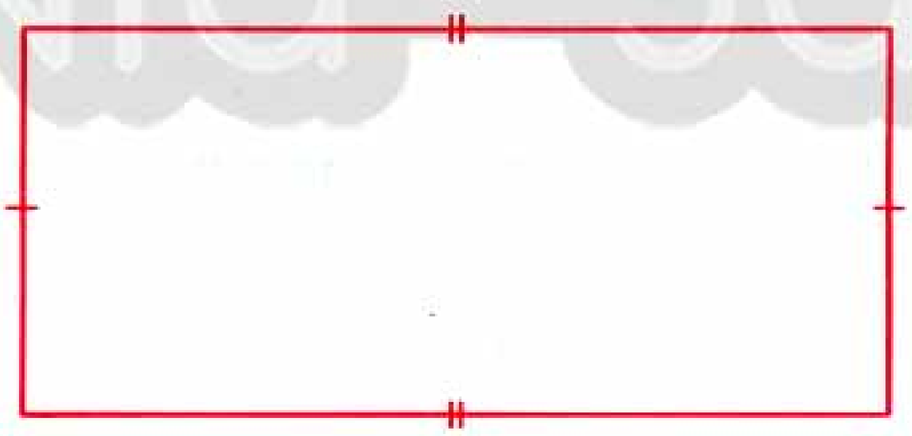
The probability = ...

(24) Mazen has 35 pounds , he bought a ball for 12.75 pounds and a book for 17.25 pounds. What is the remainder with him ?

....

....

(25) Draw the lines of symmetry for the following shape :



(26) Arrange the following in an ascending order :

5.8 , 5.08 , 58 , 8.5 and 8.05

The order is : .... , ... , ... , ... and ....

21 Souhag Governorate

Mathmatics Inspectiona

Answer the following questions :

1 Choose the correct answer :

(1) The place value of the digit 7 in the number 503.723 is ....
(tens or tenths or hundredths or units)

(2) 8 780 kg. ☐ 9 tons. (> or < or = or ≃)

(3) Six hundred , twenty-four and three tenths = ...
(246.3 or 624.3 or 264.3 or 462.3)

(4) $\frac{3}{5} + \frac{1}{5} =$ .... ($\frac{4}{10}$ or $\frac{4}{25}$ or $\frac{13}{10}$ or $\frac{4}{5}$)

(5) 5 470 ÷ 100 = ... (54.7 or 5.47 or 547 or 5 470)

(6) The number of lines of symmetry of the rectangle is ....
(zero or 4 or 2 or 3)

(7) The probability of the impossible event = ...
(2 or 0 or 1 or 0.5)

(8) The number of lines of symmetry of an isosceles triangle = ...
(4 or 3 or 2 or 1)

(9) In a rectangle , the diagonal divides it into two .... traingles.
(congruent or obtuse-angled or isosceles or equilateral)

(10) 1 litre = ... dm^3 (1 000 or 100 or 10 or 1)

(11) The probability of getting a head when throwing a metallic coin once = ... ($\frac{1}{2}$ or 1 or $\frac{1}{3}$ or 0)

(12) The probability of the impossible event ☐ The probability of the certain event. (> or < or = or ≃)

(13) 5.896 ≃ .... (to the nearest unit)
(5.8 or 589.6 or 6 or 5.9)

(14) 6 457 ≃ .... (to the nearest hundred)
(640 or 6 400 or 6 500 or 645 700)

(15) 451 ≃ .... (to the nearest ten) (540 or 450 or 550 or 460)

(16) 0.5 + ... = 1 (0.7 or 0.5 or 0.3 or 0.2)

2 Complete each of the following :

(1) The probability of the certain event = ...

(2) 2 weeks = ... days.

(3) The square has .... lines of symmetry.

(4) $10\frac{1}{2}$ = ... (as an improper fraction)

(5) $6\frac{3}{4}$ = ... (in the decimal form)

(6) $3\frac{3}{4} + 2\frac{1}{4}$ = ...

3 Answer the following :

(1) Ahmed bought a pen for L.E. 3.75 and a ruler for L.E. 2.5
How much money did he pay ?

....

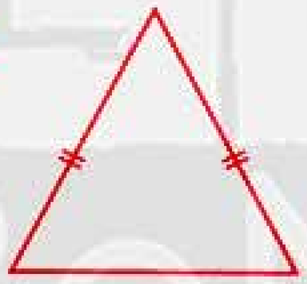
(2) A box contains 4 red balls , 5 white balls and 3 blue balls. A ball is drawn at random. Find :

[a] The probability that the drawn ball is red = ...

[b] The probability that the drawn ball is green = ...

(3) Draw the lines of symmetry for each figure :

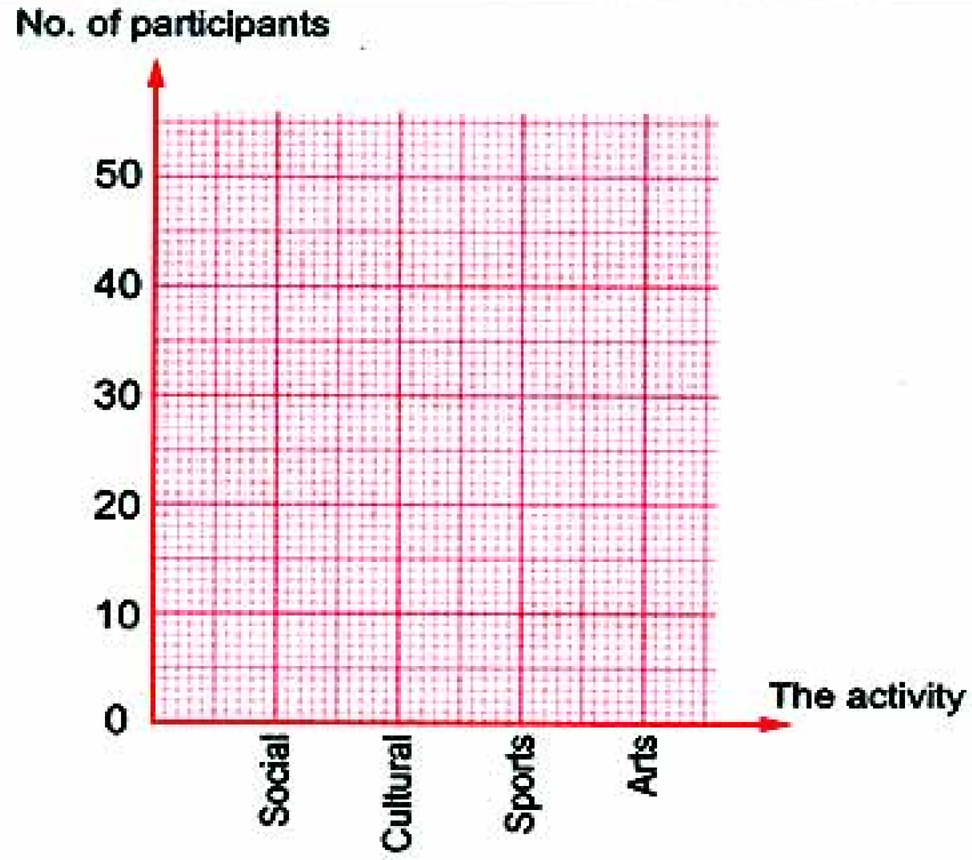
[a]



[b]

(4) Represent the following table by a bar line graph :

The activity	Social	Cultural	Sports	Arts
Number of participants	30	20	50	40



22 Qena Governorate

Qena Educational Directorate
Central Mathematics Supervision

محافظة قنا

Answer the following questions :

1 Choose the correct answer :

(1) The value of the digit 7 in the number 0.375 is ....

(70 *or* 7 *or* 0.7 *or* 0.07)

(2) The probability of the sure event = ... (0 *or* 0.5 *or* 1 *or* 2)

(3) 3 days = ... hours. (24 *or* 48 *or* 72 *or* 92)

(4) The .... has one line of symmetry.

(trapezium *or* isosceles triangle *or* parallelogram *or* rhombus)

(5) The probability of getting an even number when tossing a die once = ...

(0 *or* $\frac{1}{4}$ *or* $\frac{1}{3}$ *or* $\frac{1}{2}$)

(6) The number of lines of symmetry of a square = ...

(0 *or* 4 *or* 3 *or* 2)

(7) Fifty-two tenths is written in digits as ....

(0.52 *or* 5.2 *or* 520 *or* 0.052)

(8) $657\frac{4}{5} \simeq$ .... (to the nearest unit)

(658 *or* 657 *or* 655 *or* 659)

(9) 3.5 tons = ... kg. (35 *or* 350 *or* 3 500 *or* 35 000)

(10) $9\frac{7}{10}$ = ... (9.07 *or* 9.7 *or* 9.007 *or* 7.09)

(11) 251 056 ≃ 251 100 (to the nearest ....)

(thousands *or* ten thousands *or* hundreds *or* tens)

(12) 7 070 ÷ 100 = ... (7.7 *or* 7.07 *or* 707.7 *or* 70.7)

(13) Litre is a unit of measuring ....

(weight *or* capacity *or* time *or* length)

(14) If the polygon ABCD ≡ the polygon XYZL , then XY = ...

(CD or BC or AB or AD)

(15) $3\frac{3}{4} + 2\frac{1}{4} =$ .... (7 or 6 or 8 or 5)

(16) $\frac{2}{5}$ ▭ $\frac{5}{10}$ (> or < or ≥ or =)

2 Complete :

(1) 453.64 – 72.317 = ... ≃ .... (to the nearest 0.1)

(2) $\frac{5}{15} = \frac{\cdots\cdots}{3}$

(3) 9 999 ≃ .... (to the nearest 1 000)

(4) Two minutes and a quater = ... seconds.

(5) The probability of appearance of a head when tossing a coin once = ...

(6) In a rectangle , the diagonal divides it into two congruent ....

3 Answer the following :

(1) In the opposite figure :

[a] What is the name of the figure ? ....

[b] How many lines of symmetry for this figure ? ....

[c] Draw a line divides this figure into two congruent figures.

(2) Arrange the following in an ascending order :

5.8 , 5.08 , 58 , 8.5 and 8.05

The order is : .... , ... , ... , ... and ....

(3) Maha bought a group of toys for 34.75 pounds and a dress for 26.3 pounds. If she had a banknote paper of 100 pounds , find the money left with her to the nearest unit.

....

....

(4) The following table shows the productions of hand made carpets that were exhibited by a group of productions families in an exhibition :

Family	First	Second	Third	Fourth
Numbers of carpets	35	25	15	20

Represent these data by a bar line graph.

23 Luxor Governorate

Luxor Educational Directorate
Abo Bakr Language School

Answer the following questions :

1 Complete :

(1) The probability of the certain event = ...

(2) 4 litres = ... millilitres.

(3) The rectangle has .... lines of symmetry.

(4) $5 = \frac{\dots\dots}{2}$

(5) .... = 6 + 0.3

(6) 78 ÷ 10 = ...

2 Choose the correct answer :

(1) 120 seconds = ... minutes. (2 or 1 or 3 or 4)

(2) The number of axes of symmetry of square = ... (2 or 1 or 3 or 4)

(3) The probability of impossible event = ... (0 or 2 or 4 or 6)

(4) 2.325 – 0.214 = ... (2.111 or 1.222 or 1.2 or 2.1)

(5) 5.5 tons = ... kg. (550 or 50 or 5 500 or 55 000)

(6) In a rectangle , the diagonal divides it into two .... triangles. (congruent or acute-angled or isosceles or equilateral)

(7) The probability that the sun rises from the east = ... (0 or 1 or 3 or 5)

(8) 65 432.1 ≃ .... (to the nearest thousand) (6 600 or 65 000 or 600 000 or 60)

(9) The isosceles trapezium has .... line of symmetry. (1 or 0 or 3 or 4)

(10) The probability of getting an even number when tossing a die once = ... ($\frac{1}{2}$ or $\frac{3}{4}$ or $\frac{1}{3}$ or $\frac{1}{4}$)

(11) 64.69 ≃ .... (to the nearest unit) (64 or 65 or 66 or 67)

(12) The number that included between 0.64 and 0.65 is .... (0.655 or 0.645 or 0.635 or 0.625)

(13) 7 153 ≃ .... (to the nearest hundred) (7 750 or 7 250 or 7 150 or 7 200)

(14) $\frac{2}{3}$ ☐ $\frac{5}{7}$ (< or > or =)

(15) $4\frac{7}{50}$ = ... (4.123 or 4.14 or 4.25 or 6.2)

(16) 4.6 ☐ 4.7 (< or > or =)

3 Answer the following :

(1) Essam had 7.5 pounds , he gave his youngest brother 2.25 pounds. How much money is left with Essam ?

....

(2) Find : 14.352 + 25.687 = ... ≃ .... (to the nearest tenth)

(3) Complete : Two polygons are congruent if :

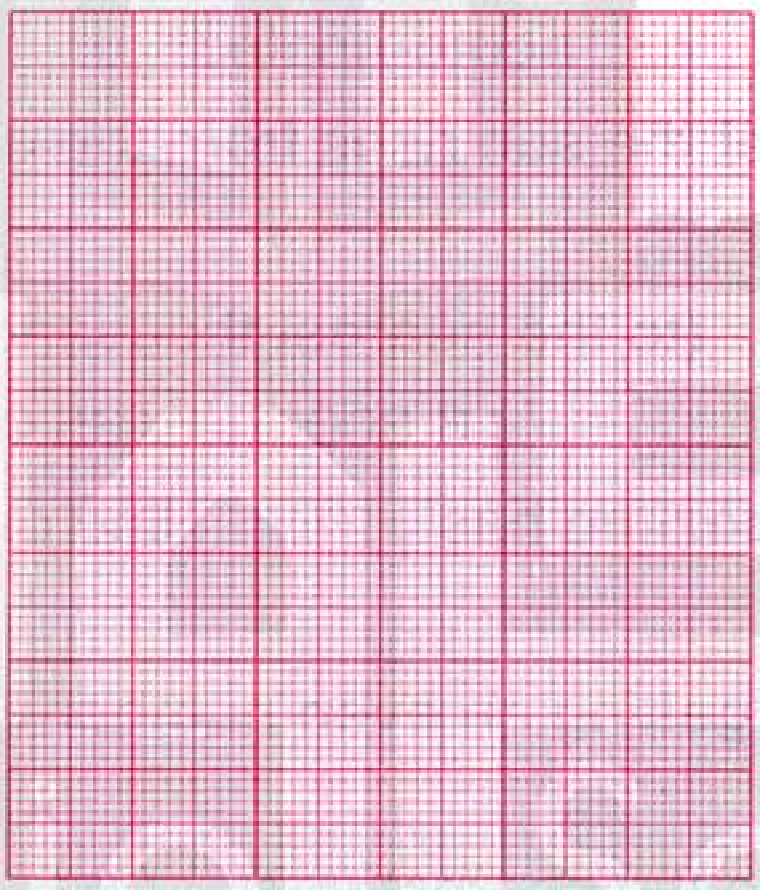
[a] Their corresponding .... are equal in length.

[b] Their corresponding .... are equal in measure.

(4) The following table shows the number of pupils in the first four grades in a primary school :

Grade	First	Second	Third	Fourth
Numbers of pupils	30	50	70	40

Represent these data by a bar line graph.



24 Aswan Governorate

Aswan Educational Directorate
Aswan Notre Dame College

Answer the following questions :

1 Choose the correct answer :

(1) 236 ≃ .... (to the nearest ten) (230 or 240 or 250 or 260)

(2) 348 ÷ 10 = ... (3.8 or 8.3 or 34.8 or 38.4)

(3) 11.7 – 1.3 = ... (10.4 or 11.4 or 12.7 or 13)

(4) The probability of the occurrence of the sure event = ...
(0 or $\frac{1}{2}$ or 1 or 2)

(5) 4 litres = ... millilitres. (0.4 or 40 or 400 or 4 000)

(6) 28.3 ≃ .... (to the nearest unit) (3 or 8.3 or 28 or 283)

(7) 412 ÷ 100 = ………… (0.412 or 4.12 or 41.2 or 412)

(8) The number of lines of symmetry of a square = ………… (0 or 1 or 3 or 4)

(9) 12.57 ≃ ………… (to the nearest tenth) (12 or 12.5 or 12.6 or 13)

(10) 3 499 ≃ ………… (to the nearest hundred) (3 400 or 3 500 or 3 740 or 4 400)

(11) 16.3 ☐ 6.63 (> or = or < or ≤)

(12) 3 tons = ………… kg. (3 000 or 5 000 or 6 000 or 6 500)

(13) $\frac{3}{5} = \frac{6}{\cdots}$ (3 or 5 or 10 or 15)

(14) In a rectangle, the diagonal divides it into two ………… triangles. (congruent or obtuse-angled or isosceles or equilateral)

(15) 2.65 + 9.3 = ………… (11.95 or 24.3 or 49.16 or 65)

(16) $1 - \frac{3}{4}$ = ………… ($\frac{1}{8}$ or $\frac{1}{4}$ or $\frac{1}{2}$ or $\frac{3}{4}$)

2 Complete :

(1) 4 275 ≃ ………… (to the nearest thousand)

(2) The number of lines of symmetry of a rectangle = …………

(3) 83.57 – 14.451 = …………

(4) $3\frac{1}{4} + 1\frac{1}{4}$ = …………

(5) 3 days = ………… hours.

(6) The probability of getting a head when tossing a coin once = …………

3 Answer the following :

(1) Youssef has 48.5 pounds, he bought a shirt for 36.75 pounds. How much money were left with him ?

……………………………………………………………………

(2) Mai bought notebooks for 32.25 pounds and a book for 17.55 pounds. What is the total money that she paid ?

……………………………………………………………………

(3) Arrange the following in an ascending order :

8 litres , 9 000 millitres , 5 litres and 6 500 millitres

The order is : ………… , ………… , ………… and …………

(4) The table below shows the number of hours that Walid and Fouad spent to study their lessons in a week :

Day / Pupil	Sat.	Sun.	Mon.	Tues.
Walid	3	4	3	6
Fouad	4	5	2	5

Represent these data by double bars graph.

25 South Sinai Governorate

El-Tur Educational Zone
Maths Inspection

Answer the following questions :

1 Choose the correct answer :

(1) $1\frac{1}{3}$ as an improper fraction = ... ($\frac{1}{3}$ or $\frac{2}{3}$ or $\frac{3}{3}$ or $\frac{4}{3}$)

(2) $\frac{2}{5} = \frac{\cdots\cdots}{10}$ (3 or 4 or 5 or 6)

(3) $1\frac{3}{100}$ = ... (in the decimal form)

(1.3 or 1.03 or 0.13 or 0.013)

(4) The number 17.92 lies between ....

(15 , 16 or 16 , 17 or 17 , 18 or 18 , 19)

(5) 508 ☐ 436.9 (> or < or = or ≤)

(6) 78 × 10 = ... (780 or 78 or 7.8 or 0.78)

(7) 1.1 , 2.2 , 3.3 , 4.4 , are called ....

(prime numbers or even numbers or odd numbers or decimal numbers)

(8) 3.25 ≃ .... (to the nearest tenth) (3.4 or 3.3 or 3.2 or 3.1)

(9) 0.6 + ... = 1 (0.1 or 0.2 or 0.3 or 0.4)

(10) In the rectangle , the diagonal divides it into two .... triangles.
(congruent or acute-angled or isosceles or equilateral)

(11) The number of lines of symmetry of the square = ...
(6 or 4 or 3 or 2)

(12) 5 000 kg. = ... tons. (0.05 or 0.5 or 5 or 50)

(13) 48 hours = ... days. (8 or 4.8 or 2 or 3)

(14) 521 ÷ 10 = ... (5.21 or 52.1 or 5 210 or 52 100)

(15) The probability of the impossible event = ...
(zero or $\frac{1}{2}$ or 1 or 2)

(16) A bag contains 6 red balls and 4 green balls , all balls are identical , a ball is drawn randomly , then the probability of getting a green ball = ... (0.6 or 0.4 or 10 or 6)

2 Complete the following :

(1) The number of lines of symmetry of the rectangle = ...

(2) Three tenths is written as .... (in the decimal form)

(3) $\frac{4}{10}$ + 0.6 = ...

(4) Any two polygons are congruent if their corresponding sides are equal in length and their corresponding .... are equal in measure.

(5) The litre = ... millilitres.

(6) 893.33 + 506.97 = ...

3 Answer the following :

(1) Find the result of :

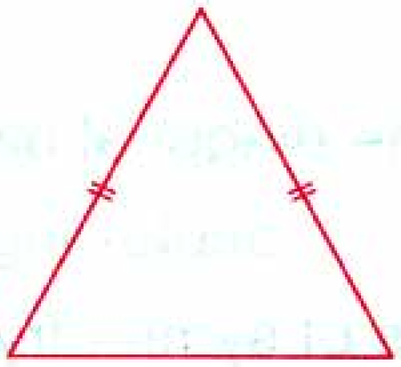
36.84 – 18.73 = ... ≃ .... (to the nearest unit)

(2) Arrange the following numbers in an ascending order :

0.3 , $\frac{1}{2}$, 0.8 and $\frac{1}{4}$

The order is : .... , ... , ... and ....

(3) Using your geometric tools , draw the line of symmetry of this figure :



(4) The following table shows the number of travellers in the first four carriages of a train :

Carriages	First	Second	Third	Fourth
Numbers of travellers	60	50	70	50

Represent these data by bar line graph.

Some Schools' Examinations from Different Governorates 2018

1 Cairo Governorate

El-Nozha Directorate of Education
Nozha Language Schools

Answer the following questions :

1 ***Complete :***

[a] Thirty five and seventy one thousandths = ... (in digits)

[b] 39 days ≃ .... weeks. (to the nearest week)

[c] The probability of the sure event = ...

[d] The value of the digit 9 in 2.798 is ....

[e] $\left(\frac{7}{9} - \frac{2}{9}\right) + \frac{4}{9} =$ ....

2 ***Choose the correct answer :***

[a] $\frac{4}{10} + \frac{3}{5} =$ .... ($\frac{7}{15}$ *or* $\frac{7}{10}$ *or* 1 *or* $\frac{12}{15}$)

[b] 7 932 ≃ 7 900 (to the nearest ....)

(ten *or* hundred *or* thousand *or* unit)

[c] The number of lines of symmetry of an isosceles trapezium = ...

(1 *or* 2 *or* 3 *or* 4)

[d] The decimal fraction which is included between 0.62 and 0.63 is ....

(0.645 *or* 0.635 *or* 0.625 *or* 0.615)

3 **[a]** ***Put the suitable relation (> , < or =) :***

(1) 31.2 ☐ $3\frac{7}{50}$ **(2)** $\frac{3}{7}$ ☐ $\frac{2}{5}$

(3) $\frac{1}{2}$ hour ☐ 50 minutes **(4)** $6\frac{1}{2}$ tons ☐ 6 500 kg.

[b] ***Arrange the following numbers in an ascending order :***

34.12 , 34.2 , 34.102 and 31.24

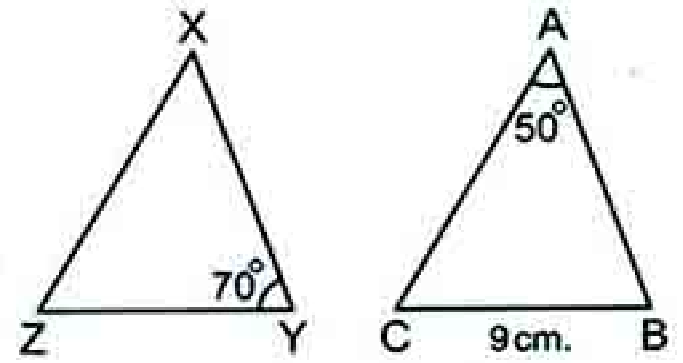
4 **[a]** ***Find the result :***

(1) 38.9 + 16.595 ≃ .... (to the nearest tenth)

(2) 256.104 = 256 + 0.1 + ... **(3)** 42.59 – 21.575 = ...

[b] A box contains 8 red balls , 6 white balls and one green ball.
What is the probability that the drawn ball is red ?

5 **[a]** If Δ ABC $\equiv$ Δ XYZ , then complete :



(1) $\overline{AB} \equiv$ ....

(2) m ($\angle$ C) = ...°

(3) $\overline{ZY} \equiv$ .... , ZY = ... cm.

[b] ***The following table shows the number of students for the first four grades in a primary school :***

The grade	First	Second	Third	Fourth
Number of student	20	30	35	15

Represent these data by a histogram.

2 Cairo Governorate

El-Waily Educational Zone
Talat Harb G.L.S.

Answer the following questions :

1 ***Complete :***

[a] 153.67 + 18.061 = ... $\simeq$ .... (to the nearest tenth)

[b] 95.90 – 13.25 = ... $\simeq$ .... (to the nearest unit)

[c] 34 598 ÷ 100 = ... $\simeq$ .... (to the nearest ten)

[d] The rhombus has .... lines of symmetry but the square has .... lines of symmetry.

2 ***Choose the correct answer :***

[a] The value of digit 2 in the number 31.253 is ....

(0.02 ***or*** 20 ***or*** 0.2 ***or*** 2)

[b] The decimal which is included between 0.51 and 0.52 is ....

(55 ***or*** 512 ***or*** 0.510 ***or*** 0.513)

[c] 6 250 kg. = ... ton. ($6\frac{1}{4}$ ***or*** $6\frac{1}{2}$ ***or*** $6\frac{3}{4}$ ***or*** $3\frac{1}{4}$)

[d] The probability of impossible event = ...

(zero ***or*** 1 ***or*** $\frac{1}{2}$ ***or*** $\frac{1}{6}$)

3 **[a]** ***Find the result :***

(1) $\frac{2}{3} + \frac{3}{5}$ (to mixed number) **(2)** $\frac{5}{6} - \frac{1}{3}$ (to the simplest form)

[b] Complete :

(1) If the polygon ABCD ≡ the polygon XYZL , then ∠ A ≡ ....

(2) Two polygons are congruent if their corresponding sides are .... in length and their corresponding angles are .... in measure.

4 Choose the correct answer :

[a] A box contains 4 red balls , 3 green balls and 5 blue balls , a ball is drawn randomly , the probability of drawn a non-red ball = ...

($\frac{3}{4}$ *or* $\frac{2}{3}$ *or* $\frac{5}{12}$ *or* 1)

[b] 8 237 milliliters = ... liters.

(8237 *or* 8.237 *or* 823.7 *or* 82.37)

[c] $\frac{1}{4}$ day = ... hours. (48 *or* 1000 *or* 6 *or* 24)

[d] 5.06 = 5 + ... (6 *or* 0.6 *or* 60 *or* 0.06)

5 [a] Mohamed has L.E. 100 , he bought a shirt for L.E. 45.25 and a pair of shoes for L.E. 40.5 How much money was left him ?

[b] ***The following table represents the marks of Karim and Hoda in the examination :***

Subject / Name	Arabic	English	Math	Science
Karim	20	30	40	50
Hoda	10	20	30	40

Represent these data by double bar graph.

3 Cairo Governorate

El-Zietoun Educational Zone
El-Ma'aref Modern Language School

Answer the following questions :

1 Complete :

[a] 10 days = ... hours. [b] $1 - \frac{1}{4}$ = ...

[c] 8970 ÷ 100 = ... [d] 624.58 ≃ .... (to the nearest tenth)

2 Choose the correct answer :

[a] The scalene triangle has .... lines of symmetry.

(3 *or* 2 *or* 1 *or* 0)

[b] One ton = ... kg. (100 *or* 1 000 *or* 10 000 *or* 10)

[c] If ABCD ≡ XYZL , then ∠ C ≡ ∠ .... (X *or* Y *or* Z *or* L)

[d] $5\frac{7}{100}$ = ... (5.07 *or* 5.7 *or* 5.007 *or* 7.05)

3 ***Put the suitable relation (> , < or =) :***

[a] 125 mL ☐ $\frac{1}{4}$ L **[b]** $\frac{3}{4}$ ☐ 0.7

[c] 1548 ÷ 100 ☐ 0.1548 × 100 **[d]** $\frac{7}{25}$ ☐ 0.028

4 **[a]** A box contains 7 red balls , 5 white balls and 4 green balls. Complete :

(1) The probability of drawn a green ball = $\frac{\cdots\cdots}{\cdots\cdots}$

(2) The probability of drawn a non-red ball = 1 – $\frac{\cdots\cdots}{\cdots\cdots}$ = $\frac{\cdots\cdots}{\cdots\cdots}$

[b] A girl has L.E. 180 She bought a hand bag for L.E. 31.6 and a pair of shoes for L.E. 82.8 How much money was left her ?

5 **[a]** ***Arrange the following numbers in an ascending order :***

4.6 , 0.46 , 46 and 4.06

[b] ***Draw a histogram which represent these data shows the money saved during 4 months :***

Months	Jan.	Feb.	March	April
Amount of money	40	35	45	30

4 Cairo Governorate

Ain Shams Educational Zone
Helmeyet Al-Zeitoun D.L.S.

Answer the following questions :

1 ***Choose the correct answer :***

[a] 54.238 + 5.8 = ... (54.296 *or* 59.246 *or* 60.038)

[b] $4\frac{3}{100}$ = ... (4.03 *or* 4.3 *or* 4.003)

[c] 42 819 ÷ 1 000 ≃ .... (to the nearest unit) (42 *or* 43 *or* 40)

[d] The square has .... lines of symmetry. (3 *or* 2 *or* 4)

[e] 7 000 milliliters = ... liters. (7 *or* 70 *or* 700)

[f] The value of 7 in the number 123.579 = ...

(70 *or* 0.07 *or* 700)

2 [a] ***Mark (✓) or (✗) :***

(1) The temperature of a person can be 70° ( )

(2) 6.8 = 0.6 + 0.8 ( )

(3) A square of side length 7 cm. can be congruent with a rectangle of a dimensions 7 cm. and 5 cm. ( )

[b] ***Choose the correct answer :***

(1) AB , ABB , ABBB , AB , ABB , ... (AB *or* ABBB *or* ABB)

(2) A box contains 4 blue balls , 2 red balls and 3 green balls , all equal in size. If a ball is drawn blindly , then the probability of drawing a blue ball = ... ($\frac{1}{4}$ *or* $\frac{4}{9}$ *or* $\frac{4}{5}$)

(3) Probability of appearance of a head when tossing a coin = ... ($\frac{1}{2}$ *or* $\frac{1}{6}$ *or* 1)

3 [a] ***Put the suitable relation (> , < or =) :***

(1) 9 750 kg. ☐ 9 tons.

(2) $\frac{1}{2}$ day ☐ 12 hours

[b] ***Arrange in an ascending order :*** 5.8 , 5.08 , 58 and 8.5

4 [a] ***Complete :***

(1) 42.79 ≃ .... (to the nearest unit)

(2) 98.451 ≃ .... (to the nearest tenths)

[b] Mazen has L.E. 24.5 , he bought a ball for L.E. 9.15 and a book for L.E. 6.35 How much money were left ?

5 ***The table below represents the number of students taking part in school activities from primary 4 and primary 5 :***

Activity	Cultural	Arts	Sports
Primary 4	10	15	30
Primary 5	20	25	15

Represent these data by double bars.

5 Cairo Governorate

Al-Khalifa and Al-Mokattam Directorate
Mathematics Inspection

Answer the following questions :

1 *Choose the correct answer :*

[a] The place value of the digit 9 in 64.192 is ....
(tenths ***or*** hundredths ***or*** thousandths ***or*** ten)

[b] Twenty five and three thousandths = ...
(25.3 ***or*** 25.03 ***or*** 2.53 ***or*** 25.003)

[c] The rectangle has .... lines of symmetry.
(1 ***or*** 2 ***or*** 3 ***or*** 4)

[d] 568 ÷ 100 ≃ .... (to the nearest unit) (6 ***or*** 5 ***or*** 5.7 ***or*** 5.6)

2 *Complete the following :*

[a] $4\frac{1}{2}$ = ... as an improper fraction.

[b] 6.487 + 9.3 ≃ .... (to the nearest tenth)

[c] The isosceles triangle has .... line of symmetry.

[d] 7 tons = ... kg.

3 *Put the suitable relation (> , < or =) :*

[a] 605 ÷ 10 ☐ 605 × 10

[b] $45\frac{4}{5}$ ☐ 45.80

[c] $\frac{1}{5}$ hour ☐ 60 minute

[d] The litre ☐ 1 000 millilitres

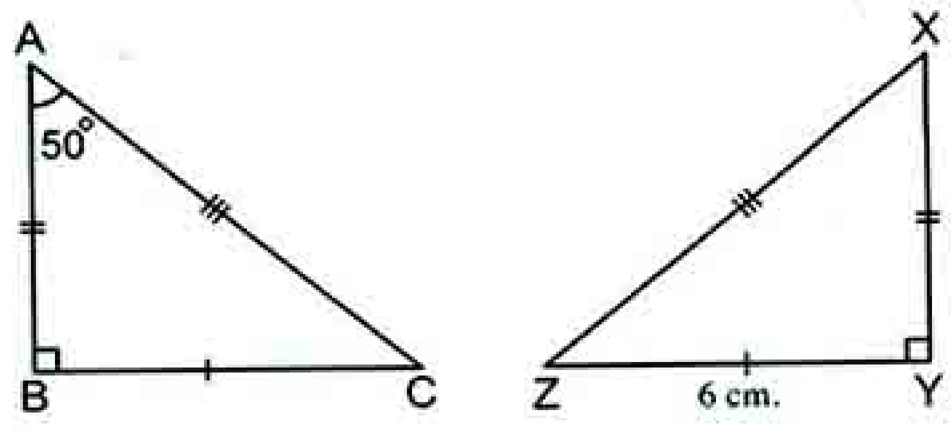
4 [a] *Arrange the following in an ascending order :*

9.4 , 7.45 , 9.06 and 7.8

[b] Amro has 98.5 pounds , he bought a shirt for 76.75 pounds.
How much money left with him ?

5 [a] *In the opposite figure :*

If △ ABC ≡ △ XYZ , YZ = 6 cm.
, m (∠ A) = 50° , complete :



(1) $\overline{XY}$ ≡ ....

(2) ∠ C ≡ ∠ ....

(3) m (∠ X) = ...°

(4) BC = ... cm.

[b] ***The table below represents the saved money of Ayah in pounds in four weeks :***

Week	First	Second	Third	Fourth
Money saved	10	15	8	12

Represent these data using a histogram.

6 Cairo Governorate

New Cairo Educational Zone
Mathematics Supervision

Answer the following questions :

1 ***Complete :***

[a] Two hundred , fifty seven and eight tenth is written as .... (in decimal)

[b] 8 849 – 2 057 = ... ≃ .... (to the nearest thousand)

[c] The diagonal in the rectangle divides it into two congruent .... but it is not a line of .... for it.

[d] 4 days = ... hours.

2 ***Choose the correct answer :***

[a] The value of digit 3 in 9.237 is .... (0.3 *or* 0.03 *or* 0.003)

[b] The isosceles trapezium has .... line (s) of symmetry. (0 *or* 1 *or* 2)

[c] The probability of appearance of head when tossing a coin once = ... (1 *or* 2 *or* $\frac{1}{2}$)

[d] 42.763 ≃ .... (to the nearest tenth) (40 *or* 42.8 *or* 42.863)

3 ***Complete :***

[a] Two decimal included between 0.53 and 0.54 are .... and ....

[b] 6.7 litres = ... dm^3.

[c] 43 tons = ... kg.

[d] The probability of appearing an odd number as throwing a fair die once = ...

4 **[a]** ***Put the suitable relation (> , < or =) :***

(1) 3 180 ÷ 100 ☐ 318 × 10

(2) 6.9 + 2.1 ☐ 11.7 – 1.7

(3) 75 minutes ☐ 0.75 hours

(4) The number of lines of symmetry of square ☐ The number of lines of symmetry of rectangle.

[b] ***Complete :***

(1) 6 273.51 ≃ 6 270 is approximated to the nearest ....

(2) 45.6 + 83.7 = ... ≃ .... (to the nearest unit)

5 **[a]** ***The table shows the studying hours of each of Ahmed and Mostafa in some days of the week :***

Name \ Day	Sat.	Sun.	Mon.
Ahmed	3	6	8
Mostafa	4	5	10

Represent these data by double bars.

[b] A box contains 5 red balls , 3 blue balls , 7 green balls , if one ball is drawn blindly. Calculate the probability that the drawn ball is :

(1) blue. **(2)** not red.

(3) red or blue. **(4)** yellow.

7 Giza Governorate

Experimental Department
Maths Inspection

Answer the following questions :

1 ***Choose the correct answer :***

[a] $8\frac{4}{5}$ = ... (8.4 *or* 8.8 *or* 8.5 *or* 5.4)

[b] 8 752 ≃ .... (to the nearest thousand)
(8000 *or* 9000 *or* 8600 *or* 7000)

[c] The isosceles triangle has .... line (s) of symmetry
(2 *or* 0 *or* 1 *or* 3)

[d] The probability of impossible event = ...
(0 *or* 1 *or* 2 *or* $\frac{1}{2}$)

2 ***Complete the following :***

[a] $7\frac{1}{4}$ litre = ... millilitres.

[b] Three and four tenths = ... (in digits)

[c] The two triangles are congruent if their corresponding .... are equal in length.

[d] The place value of digit 3 in 54.238 is .... and its value is ....

3 ***Find the restult :***

[a] 95.7 – 62.31 = ... ≃ .... (to the nearest tenth)

[b] 34.85 + 37.63 = ... ≃ .... (to the nearest unit)

[c] $\frac{1}{2} + \frac{2}{5}$ = ...

[d] 8 543 ÷ 1 000 = ...

4 **[a]** ***Arrange the following in an ascending order :***

157 , 152.3 , 153.13 and 157.1

[b] In a box , there are 5 red balls , 3 blue balls and 7 green balls , a ball is drawn randomly. What is the probability that the drawn ball is :

(1) blue. **(2)** not red. **(3)** green. **(4)** black.

5 **[a]** ***Put the suitable relation (< , > or =) :***

(1) 3.4 ☐ 3.40 **(2)** 3 kg. ☐ 300 gm.

(3) 3 weeks ☐ 28 days

[b] ***The following table shows the number of pupils in first five grades in primary school :***

The grade	First	Second	Third	Fourth	Fifth
No. of pupils	50	60	40	70	30

Represent the table by using a histogram.

8 Giza Governorate

El-Haram Educational Directorate
Maths Inspection

Answer the following questions :

1 ***Complete :***

[a] The value of 5 in 3.521 = ...

[b] One and three hundredths = ...

[c] The square has .... lines of symmetry.

[d] 2 minutes = ... seconds.

[e] If Δ ABC ≡ Δ XYZ , then $\overline{AB}$ ≡ ....

[f] 3 241 – 937 = ... ≃ .... (to the nearest hundred)

2 *Choose the correct answer :*

[a] $8\frac{27}{100}$ = ... (8.27 ***or*** 82.7 ***or*** 80.27 ***or*** 8.07)

[b] 0.2 + 3 = ... (3.2 ***or*** 2.3 ***or*** 0.23 ***or*** 23)

[c] The number between 2.4 and 2.5 is ....

(3.1 ***or*** 2.42 ***or*** 2.6 ***or*** 1.5)

[d] The probability of a certain event is ....

(0.5 ***or*** 1 ***or*** 0 ***or*** 2.5)

[e] $\frac{9}{5}$ = ... (18 ***or*** 0.18 ***or*** 1.8 ***or*** 3.6)

[f] $2\frac{1}{5} + \frac{2}{5}$ = ... ($3\frac{1}{5}$ ***or*** $3\frac{1}{2}$ ***or*** $2\frac{3}{5}$ ***or*** $3\frac{3}{4}$)

3 [a] *Put the suitable relation (< , > or =) :*

(1) 0.92 ☐ 9.2 **(2)** 1.7 ☐ $1\frac{1}{8}$

(3) 1.25 litres ☐ 1 500 millilitres

(4) $3\frac{1}{2}$ tons ☐ 3 500 kg.

(5) $\frac{3}{5} + \frac{2}{5}$ ☐ $\frac{10}{9} - \frac{1}{9}$ **(6)** 2 weeks ☐ 20 days

[b] Hossam has 42.5 pounds and his sister Hend has 9.25 pounds. Find the difference between what they have.

4 [a] A box contains 3 blue balls , 2 red balls and 4 green balls of the same size. Complete :

(1) The probability of getting a red ball = ...

(2) The probability of getting a green ball = ...

[b] *Arrange in an ascending order :*

6.25 , 6.2 , 6.3 and 3.35

5 *The following table represents the number of pupils in different levels :*

Level	First	Second	Third	Fourth
Number of pupils	7	12	9	6

Represent these data by a histogram.

9 Giza Governorate

Kerdasa Educ. Zone
Leaders Language School

Answer the following questions :

1 ***Choose the correct answer :***

[a] The next term in the pattern : AB , ABB , ABBB , ...

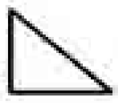
(ABB ***or*** ABBB ***or*** ABBBB ***or*** A)

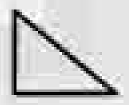
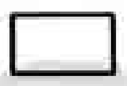
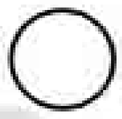
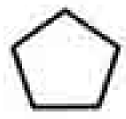
[b] The probability of impossible event = ...

(zero ***or*** 1 ***or*** 2 ***or*** 3)

[c] The isosceles triangle has .... line of symmetry.

(zero ***or*** 1 ***or*** 2 ***or*** 3)

[d] The shape  is congruent to ....

( ***or***  ***or***  ***or*** )

[e] Six hundred and five tenths = ...

(65 ***or*** 6.05 ***or*** 600.5 ***or*** 605)

---

2 ***Complete the following :***

[a] The value of the digit 6 in the number 4.625 is ....

[b] 5.07 – 3.91 = ... ≃ .... (to the nearest unit)

[c] 1 hour and half = ... minutes.

[d] 7 tenths + 4 units = ...

[e] 24.68 + 3.75 ≃ .... (to the nearest tenth)

---

3 **[a]** ***Complete the following :***

(1) The number 721 approximated to nearest 10 is ....

(2) 27.4 ÷ 10 = ...

(3) The litre = ... millilitres.

[b] Emad has 98.5 pounds. He bought a shirt for 76.75 pounds. Calculate the remainder with him.

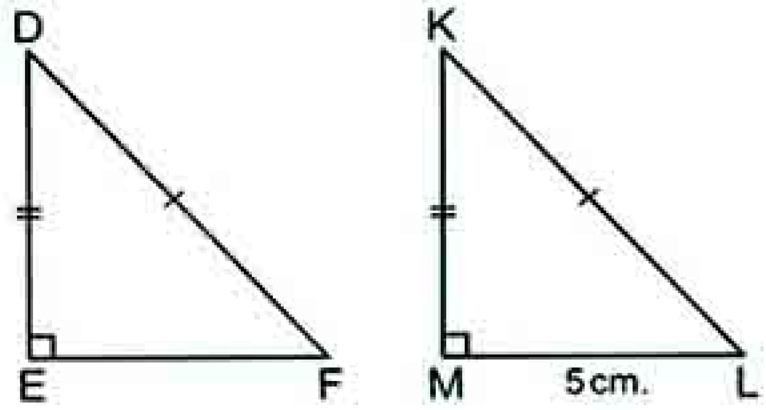
---

4 **[a]** ***Complete :*** 2 457 kg. = ... tons

[b] ***Arrange the following numbers in an ascending order :***

0.3 , 0.003 , 0.033 and 0.33

[c] ***In the opposite figure :***



If △ DEF ≡ △ KML , complete :

(1) $\overline{KL}$ ≡ ....

(2) $\overline{DE}$ ≡ ....

(3) ∠ E ≡ ∠ ....

(4) EF = ... cm.

5 ***The following table shows the production of two factories in three days :***

Day / Factory	Sat.	Sun.	Mon.
First	10	15	30
Second	20	25	15

Represent these data by a double bars graph.

10 Alexandria Governorate

El-Montazah Educational Zone
Yathrb Language School

Answer the following questions :

1 ***Complete the following :***

[a] The number 5.2 = 0.2 + ...

[b] 1 gm. = ... kg.

[c] 4 liters = ... milliliters.

[d] $8\frac{13}{100}$ = ... (decimal form)

2 ***Choose the correct answer :***

[a] The digit of tenths in the number 36.59 is .... (9 *or* 5 *or* 6)

[b] The square has .... lines of symmetry. (2 *or* 3 *or* 4)

[c] 4 275 ≃ 4 000 to the nearest .... (10 *or* 100 *or* 1000)

[d] The decimal which is included between 0.3 and 0.4 is .... (0.41 *or* 0.31 *or* 0.13)

3 **[a]** ***Put the suitable relation (< , > or =) :***

(1) 28.4 ☐ 2.84

(2) $\frac{1}{2}$ ☐ 0.5

(3) 6 tons ☐ 8 780 kg.

[b] ***Arrange the following numbers in an ascending order :***

0.36 , 3.6 , 6.3 and 0.63

4 **[a]** ***Find the result :***

(1) 95.7 – 62.31 = ... ≃ .... (to the nearest 0.1)

(2) 34.85 + 37.63 = ... ≃ .... (to the nearest unit)

[b] A box contains 4 blue balls , 6 red balls and 5 green balls. If a ball is drawn blindly. Find :

(1) The probability that the ball is red.

(2) The probability that the ball is green.

---

5 **[a]** If Hosam has 425 pounds and his sister Hoda has 98.75 pounds. Find the difference between them.

[b] ***The following table represents the number of pupils in the four grades in a primary school :***

Grade	First	Second	Third	Fourth
Number of pupils	30	45	50	20

Represent these data by a histogram.

11 Alexandria Governorate

East Educational Zone
Supervision of Maths

Answer the following questions :

1 ***Choose the correct answer :***

[a] One hundred , fifty eight and seven tenths is ....

(15.8 ***or*** 15870 ***or*** 158.7 ***or*** 100.57)

[b] 4 750 milliliters = ... liters. (475 ***or*** 47 ***or*** $47\frac{1}{2}$ ***or*** $4\frac{3}{4}$)

[c] The probability of appearing an odd number on the upper face of a die = ... ($\frac{1}{6}$ ***or*** $\frac{2}{6}$ ***or*** $\frac{3}{4}$ ***or*** $\frac{1}{2}$)

[d] $457\frac{1}{5}$ ≃ .... to the nearest whole number.

(457 ***or*** 458 ***or*** 467 ***or*** 557)

---

2 ***Put the suitable relation (> , < or =) :***

[a] 6.75 ÷ 100 ☐ 0.675

[b] 8 780 kg. ☐ 9 tons.

[c] 84 hours ☐ 5 days

[d] Number of lines of symmetry in an equilateral triangle ☐ Number of lines of symmetry in a rhombus.

3 Complete :

[a] 32 days ≃ .... weeks (to the nearest week)

[b] $8\frac{3}{4}$ = ... (as a decimal form)

[c] The two polygons are congruent if their corresponding sides are .... and their corresponding .... are equal in measure.

[d] The probability of appearing a head as throwing a metallic coin once = ...

4 [a] Draw the lines of symmetry of each following shapes :

(1) □ (2) ▭

[b] ***Represent the following data by using a histogram :***

Activity	Sport	Social	Art
Number of pupils	16	11	14

5 *Find the result :*

[a] 12.7 + 10.007 = ... ≃ .... (to the nearest tenth)

[b] 96.8 – 62.312 = ... ≃ .... (to the nearest $\frac{1}{100}$)

[c] 23 456 ÷ 100 = ... ≃ .... (to the nearest ten)

[d] 52.46 – 2.731 = ... ≃ .... (to the nearest unit)

12 Alexandria Governorate

West Educational Zone
Mathematics Supervision

Answer the following questions :

1 *Choose the correct answer :*

[a] $7\frac{3}{5}$ = ... (7.3 *or* 7.6 *or* 7.5 *or* 5.3)

[b] The value of the digit 6 in the number 18.16 is .... (6 *or* 60 *or* 0.06 *or* 600)

[c] The probability of the impossible event is .... (0 *or* 0.5 *or* 1 *or* 2)

[d] From the methods of collecting data is .... (symmetry *or* congruence *or* observation)

2 *Complete :*

[a] $4\frac{7}{10}$ + 4.07 = ...

[b] 1 548 ÷ 100 ≃ .... approximate the result to the nearest tenth.

[c] The equilateral triangle has .... lines of symmetry.

[d] Six and forty three hundredths is written as ....

3 ***Put (✓) or (✗) :***

[a] The place value of the digit 2 in the number 54.127 = 0.02 ( )

[b] The number 8 500 is the approximating value of the number 8 532 to the nearest 1 000 ( )

[c] The improper fraction to the number $5\frac{1}{4}$ is $\frac{10}{40}$ ( )

[d] It is possible to congruent the acute-angled triangle with another right-angled triangle. ( )

4 **[a]** Write three decimal numbers included between 1.7 and 1.8

[b] If Amro has 322 pounds and his brother Mohamed has L.E. 85.75 Find the difference between what they have.

5 **[a]** A box contains 4 blue balls , two red balls , 3 green balls and a white ball. What is the probability that the drawn ball is blue ?

[b] ***The following table shows the number of students in the school activities in a school :***

The activity	Cultural	Art	Sport
The number of students in grade 5	20	10	30
The number of students in grade 6	25	20	15

Represent these data by double bars graph.

13 El-Kalyoubia Governorate

Directorate of Education
Mathematics Supervision

Answer the following questions :

1 ***Choose the correct answer :***

[a] The value of the digit 7 in the number 29.476 is ....
(7 *or* 0.7 *or* 0.07 *or* 0.007)

[b] 876 ≃ 900 approximated to the nearest ....
(ten *or* hundred *or* unit *or* tenth)

[c] The probability of getting the number 3 on the upper face when rolling a dice once = ... ($\frac{1}{2}$ *or* $\frac{1}{3}$ *or* $\frac{1}{6}$ *or* $\frac{1}{4}$)

[d] The decimal which included between 0.83 and 0.84 is ....
(0.845 *or* 0.825 *or* 0.852 *or* 0.835)

2 Complete :

[a] The probability of the certain event = ...

[b] The rectangle has .... lines of symmetry.

[c] 37 $\frac{7}{1000}$ = ... (as a decimal number)

[d] 12.35 + 36.453 = ... ≃ .... (to the nearest unit)

3 Put the suitable relation (> , < or =) :

[a] 3 350 gm. ☐ 3 $\frac{1}{4}$ kg. [b] 0.745 ☐ 745 ÷ 100

[c] 9 hours ☐ $\frac{1}{3}$ days [d] 250 millilitres ☐ $\frac{1}{4}$ litre

4 Find the result :

[a] 953.3 – 64.25 = ... ≃ .... (to the nearest ten)

[b] 9 $\frac{3}{7}$ + $\frac{10}{21}$ = ...

[c] 29 days ≃ .... weeks (to the nearest week)

5 [a] Arrange the following numbers in an ascending order :

0.78 , 8.7 , 7.8 and 0.87

[b] The following table represents the number of pupils in the first four grades in a primary school :

Grade	First	Second	Third	Fourth
Number of pupils	40	50	85	60

Represent the data by histogram.

14 El-Sharkia Governorate

Directorate of Education
Dep. of Governmental L. Schools

Answer the following questions :

1 Choose the correct answer :

[a] The rectangle has .... lines of symmetry. (1 or 2 or 3 or 4)

[b] The probability of impossible event = ... (1 or 2 or 0 or 3)

[c] 6.48 = 6 + ... + 0.08 (0.4 or 40 or 0.04 or 0.48)

[d] 236 ≃ .... (to the nearest ten) (23 or 240 or 230 or 200)

2 Complete :

[a] 3 days = ... hours. [b] 4 $\frac{7}{100}$ = ... (in decimal)

[c] The probability of certain event = ...

[d] The two squares are congruent if their sides are ....

3 ***Put the suitable relation (> , < or =) :***

[a] 750 gm. ☐ $\frac{1}{2}$ kg. **[b]** 4 litres ☐ 5240 millilitres

[c] $\frac{17}{3}$ ☐ $5\frac{2}{3}$ **[d]** 14.96 ÷ 10 ☐ 13.96

4 **[a]** ***Find the result of :***

(1) 34.85 + 67.52 = ... ≃ .... (to the nearest tenth)

(2) 642.59 – 187.83 = ... ≃ .... (to the nearest hundred)

(3) $\frac{7}{10} + \frac{1}{5}$ = ...

[b] ***Arrange in an ascending order :*** 0.6 , $\frac{2}{3}$, $\frac{4}{5}$ and $\frac{7}{15}$

5 **[a]** Hanaa has 500 pounds , she wants to buy 10 books each book for 42.75 pounds. Find the remainder with her.

[b] ***The following table shows the number of absentees pupils from the 4th grade and 5th grade in a school within 4 day :***

Grade \ Day	Sat.	Sun.	Mon.	Tue.
Fourth	8	7	6	5
Fifth	6	4	8	5

Represent these data by double bars.

15 El-Monofia Governorate

Shebin El-Koum Educational Zone
Mathematics Supervision

Answer the following questions :

1 ***Complete the following :***

[a] $6\frac{1}{4}$ = ... (as improper fraction)

[b] 1 000 gm. = ... ton.

[c] The probability of the certain event = ...

[d] 3 500 milliliters = ... liters.

2 ***Choose the correct answer :***

[a] $9\frac{3}{100}$ = ... (9.03 *or* 9.3 *or* 9.003 *or* 9.04)

[b] 84 hours = ... days. (2 *or* 3.5 *or* 4 *or* 5)

[c] The rectangle has .... lines of symmetry. (1 *or* 2 *or* 3 *or* 4)

[d] $\frac{4}{10}$ + 0.7 = ... (3.8 *or* 0.11 *or* 1.1 *or* 7.4)

3 [a] ***Find the result :***

(1) 3.7 + 4.25 = ... ≃ .... (to the nearest unit)

(2) 19.45 – 8.9 = ... ≃ .... (to the nearest $\frac{1}{10}$)

[b] ***Complete :***

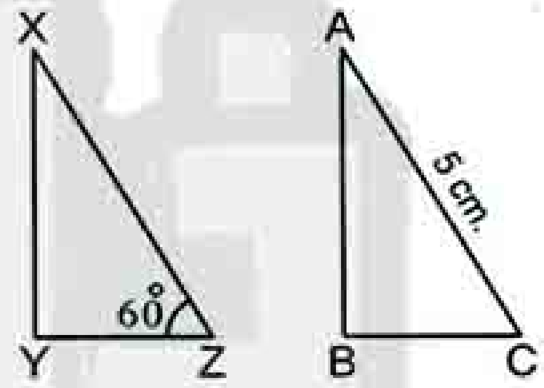
(1) The two polygons are congruent if the corresponding .... are equal in length and corresponding .... are equal in measure.

(2) The probability of appearing an odd number on the upper of face of a die = ...

4 [a] ***The following table shows the number of studying hours of each of Ziad and Amir in some days of the week :***

Name \ Day	Sat.	Sun.	Mon.
Ziad	3	4	6
Amir	4	5	4

Represent these data by double bars.



[b] If Δ ABC ≡ Δ XYZ , then complete :

(1) $\overline{XZ}$ ≡ .... , XZ = ... cm.

(2) ∠ Z ≡ ∠ .... , m (∠ Z) = ...

5 [a] A box contains 4 blue balls , 2 red balls and 5 green balls. If a ball is drawn blindly. Complete :

(1) The probability that the ball is red = ...

(2) The probability that the ball is not green = ...

[b] Mazen has 35 pounds. He bought a ball for 9.75 pounds and a book for 840 piasters. How much money were left with him ?

16 El-Gharbia Governorate

East Tanta Directorate
Future Language Schools

Answer the following questions :

1 ***Complete each of the following :***

[a] 7.38 ≃ .... (to the nearest tenth)

[b] The value of the digit 3 in the number 54.238 is ....

[c] The isosceles triangle has .... line of symmetry.

[d] 2 days = ... hours.

2 Choose the correct answer :

[a] $\frac{3}{4}$ = ... (0.75 or 5.7 or 0.075 or 0.25)

[b] 5 860 mL = ... L (5860 or 58.6 or 5.86 or 58.68)

[c] $1 - \frac{1}{5}$ = ... ($\frac{2}{5}$ or $\frac{3}{5}$ or 1 or $\frac{4}{5}$)

[d] The probability of certain event = ... (0 or 1 or 2 or $\frac{1}{2}$)

3 [a] ***Put the suitable relation (> , < or =) :***

(1) 500 mL ☐ $\frac{3}{4}$ litre (2) 1 day ☐ 16 hours

[b] ***Find the result :***

(1) 5.98 + 10.237 = ... ≃ .... (to the nearest 10)

(2) 49.57 ÷ 10 = ... ≃ .... (to the nearest unit)

4 [a] Yousef has 48.5 pounds , he bought a shirt for 36.75 pounds. Find the remainder with him.

[b] ***Arrange the following numbers in an ascending order :***

0.45 , 5.4 , 4.5 and 0.54

5 [a] When throwing a fair die once , find the probability of the following :

(1) Appearing an even number. (2) Appearing number 3

[b] ***The following table shows the number of pupils in each grade :***

Grade	First	Second	Third	Fourth	Fifth
Number of pupils	30	25	20	35	40

Represent these data using a histogram.

17 El-Dakahlia Governorate

Maths Supervision for (E.L.S.)

Answer the following questions :

1 Complete the following :

[a] $56 \frac{7}{1000}$ = ... (in the decimal form)

[b] The isosceles triangle has .... line of symmetry.

[c] 831.56 ≃ .... (to the nearest ten)

[d] 2 tons = ... kg.

2 *Choose the correct answer from those given :*

[a] The place value of the digit (4) in the number 8.4 is ....

(units ***or*** tens ***or*** tenths ***or*** hundreds)

[b] Five and seven tenths = ... (5.7 ***or*** 0.57 ***or*** 7.5 ***or*** 0.75)

[c] The liter = ... milliliter. (10 ***or*** 100 ***or*** 1 000 ***or*** 1 000 000)

[d] The quarter of a day = ... hours. (24 ***or*** 12 ***or*** 8 ***or*** 6)

3 *Put the suitable relation (< , > or =) :*

[a] 750 gm. ☐ $\frac{1}{2}$ kg. **[b]** 608 ÷ 10 ☐ 608 × 10

[c] 48 hours ☐ 2 days **[d]** 6.9 + 2.1 ☐ 11.7 – 1.7

4 *Find the result of the following :*

[a] 45.85 + 48.63 = ... ≃ .... (to the nearest unit)

[b] 95.7 – 62.31 = ... ≃ .... (to the nearest $\frac{1}{10}$)

[c] $1 - \frac{1}{9}$ = ... ≃ .... (to the nearest whole number)

[d] 57 days ≃ .... weeks. (to the nearest week)

5 [a] Emad has 98.5 pounds. He bought a shirt for 76.75 pounds.
Calculate the remainder with him.

[b] ***The table below shows the number of pupils in primary 4 participating in school activities in a primary school :***

Activity	Sport	Social	Artistic	Cultural
Number of pupils	10	12	18	10

Represent these data using a histogram.

18 Ismailia Governorate

Directorate of Education
Suez Canal Authority Lang. School

Answer the following questions :

1 *Choose the correct answer :*

[a] 236 ≃ .... (to the nearest ten) (230 ***or*** 240 ***or*** 250 ***or*** 260)

[b] $\frac{2}{5} + \frac{1}{5}$ = ... ($\frac{3}{10}$ ***or*** $\frac{3}{5}$ ***or*** $\frac{3}{25}$ ***or*** $\frac{11}{25}$)

[c] 67.23 ÷ 10 ≃ .... (to the nearest hundredth)

(67.2 *or* 6.72 *or* 67.23 *or* 6.723)

[d] The value of the digit 5 in the number 8.256 is ....

(0.5 *or* 0.05 *or* 5 *or* 50)

2 ***Complete :***

[a] A box contains 4 blue balls , two red balls and 3 green balls , the probability of drawing a blue ball is ....

[b] 5 tons = ... kg.

[c] 750 000 millilitre = ... litre.

[d] The isosceles triangle has .... line of symmetry.

3 ***Put the suitable relation (> , < or =) :***

[a] 48 hours ☐ 3 days.

[b] Number of lines of symmetry of a square ☐ Number of lines of symmetry of a rectangle.

[c] $\frac{4}{5}$ ☐ 0.06

[d] The probability of the certain event ☐ The probability of the impossible event.

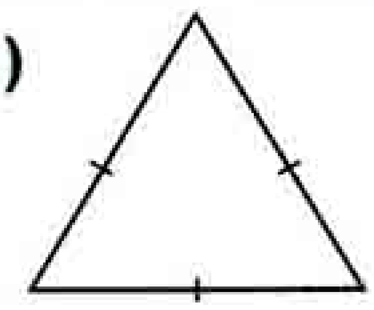
4 **[a]** Ali has 12.85 pounds and his sister has 8.55 pounds.

Find the difference between what they have to the nearest unit.

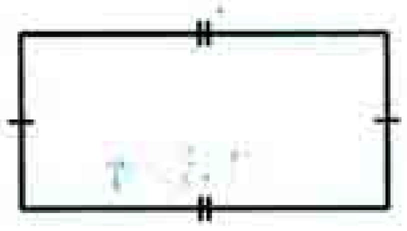
[b] ***Arrange in an ascending order :*** 7.2 , 3.81 , 7.56 and 3.02

5 **[a]** Draw the lines of symmetry of each of the following shapes :

(1)



(2)



[b] ***The following table shows the number of pupils participating in the school activities :***

Activity	Sport	Social	Art	Cultural
Number of pupils	45	25	30	15

Represent these data by a histogram.

19 Suez Governorate

Educational Directorate
Math. inspectorater

Answer the following questions :

1 *Complete :*

[a] 9.083 = 9 + ... + ...

[b] 3 tons = ... kg.

[c] 831.56 ≃ .... (to the nearest tenth)

[d] The isosceles triangle has .... line of symmetry.

[e] $1\frac{3}{4}$ + 8.75 = ... ≃ .... (to the nearest unit)

2 *Choose the correct answer :*

[a] The probability of appearing a head as throwing a metallic coin once = ... (1 *or* $\frac{1}{2}$ *or* 0 *or* $\frac{2}{3}$)

[b] One day = ... minutes. (3600 *or* 60 *or* 24 *or* 1440)

[c] 236 ≃ .... (to the nearest ten) (230 *or* 240 *or* 200 *or* 260)

[d] 1 milliliter = ... liter. (1000 *or* $\frac{1}{1000}$ *or* 100 *or* 1)

[e] 0.021 is greater than .... (0.012 *or* 0.1 *or* 0.2 *or* 0.03)

3 [a] Amr has 322 pounds and his brother Mohamed has 85.75 pounds. Find difference between what they have.

[b] ***Arrange in an ascending order :*** 1.5 , 0.51 , 5.1 and 0.15

4 [a] *Complete :*

(1) The two polygons are congruent if their corresponding .... are equal in length and their corresponding .... are equal in measure.

(2) Five and seven tenths = ... (as a digits)

[b] A box contains 6 red balls , 5 white balls and 5 green balls , what is the probability that the drawn ball is :

(1) red ball. **(2)** not white. **(3)** black ball.

5 [a] *Put (< , > or =) :*

(1) 48 hours ☐ 3 days **(2)** 4.5 ☐ 4.50

[b] ***The following table shows the number of absentees pupils from 4^{th} grade and 5^{th} grade :***

Grade \ Day	1^{st}	2^{nd}	3^{rd}	4^{th}
4^{th}	8	7	6	5
5^{th}	6	4	8	5

Represent these data by double bars.

20 Kafr El-Sheikh Governorate

Dossoq Educational Zone
Maths Inspection

Answer the following questions :

1 ***Find the result :***

[a] 100.35 + 26.25 = ... **[b]** 13.69 – 9.63 = ...

[c] 4 569 ÷ 1 000 = ... **[d]** 37.28 ≃ .... (to the nearest tenth)

2 ***Complete :***

[a] There are .... lines of symmetry in the rectangle.

[b] Five and four tenths is written as ....

[c] 0.3 + ... = 1

[d] The polygon ABCD ≡ XYZL , then ∠ A ≡ ∠ ....

3 ***Choose the correct answer :***

[a] 5.896 ≃ .... (to the nearest unit) (5.8 ***or*** 589.6 ***or*** 6 ***or*** 5.9)

[b] 5 litres = ... dm^3 (5000 ***or*** 500 ***or*** 50 ***or*** 5)

[c] .... is the unit of measuring capacity.
(m. ***or*** cm. ***or*** kg. ***or*** litre)

[d] The probability of impossible event = ...
(1 ***or*** 0 ***or*** 0.5 ***or*** 5)

4 ***Put the suitable relation (< , > or =) :***

[a] 2 years ☐ 12 months **[b]** 1300 m. ☐ 1.3 km.

[c] Half day ☐ 7 hours **[d]** 7 hundredths ☐ 0.7

5 **[a]** ***Arrange the following numbers ascendingly :***

12.25 , 12.51 , 36.5 , 12 and 3.6

[b] ***The table below represents the number of students taking part in the activities from primary three and four :***

Activity	Cultural	Arts	Sports
Primary 3	30	40	50
Primary 4	10	15	20

21 El-Beheira Governorate

Damanhour Educational Directorate
Safwa Language School

Answer the following questions :

1 ***Complete the following :***

[a] 29.095 ≃ .... (to the nearest tenth) **[b]** $\frac{\cdots\cdots}{16} = \frac{3}{4}$

[c] 2.5 liter = ... milliliter.

[d] The equilateral triangle has .... lines of symmetry.

2 ***Choose the correct answer :***

[a] 7 342 ≃ 7 000 (to the nearest ....)
(ten ***or*** hundred ***or*** thousand ***or*** ten thousand)

[b] The number $\frac{9}{2}$ = ... ($4\frac{1}{2}$ ***or*** $4\frac{1}{3}$ ***or*** $4\frac{3}{5}$ ***or*** $4\frac{2}{5}$)

[c] 7 500 gm. = ... kg. (7 ***or*** $7\frac{1}{4}$ ***or*** $7\frac{1}{2}$ ***or*** $7\frac{3}{4}$)

[d] The probability of appearing an odd number on the upper face of die = ... ($\frac{1}{6}$ ***or*** $\frac{2}{6}$ ***or*** $\frac{3}{4}$ ***or*** $\frac{1}{2}$)

3 ***Put the suitable relation (< , > or =) :***

[a] 2.74 ☐ 27.40

[b] The number of lines of symmetry of the square ☐ The number of lines of symmetry of the rhombus.

[c] $1\frac{1}{2}$ hour ☐ 75 minutes.

[d] The probability of the impossible event ☐ The probability of the certain event.

4 **[a]** ***Find the result :***

(1) 95.7 – 62.31 = ... ≃ .... (to the nearest unit)

(2) 87 852 + 25 764 = ... ≃ .... (to the nearest 100)

[b] If Mazen has 33.2 pounds and his brother Mohamed has 85.75 pounds. Find the difference between what they have.

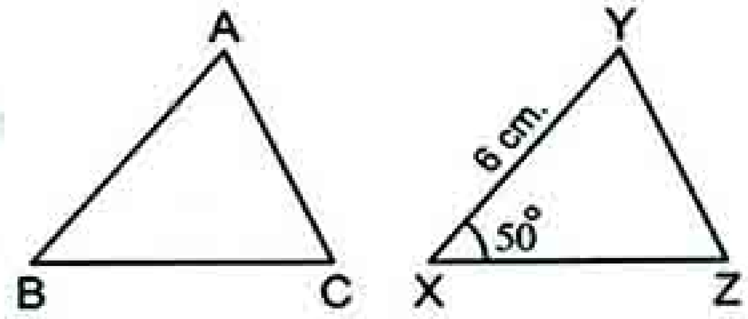
5 **[a]** ***In the opposite figure :***

$\Delta ABC \equiv \Delta XYZ$, complete :

(1) $\angle A \equiv \angle$ .... , m ($\angle$ A) = ...°

(2) $\overline{XZ} \equiv$ ....

(3) $\overline{AB} \equiv$ .... , AB = ... cm. **(4)** $\angle Y \equiv \angle$ ....



[b] ***The following table shows the number of hours of studying the lesson by Waleed and Hesham in five days :***

Day / Name	Sat.	Sun.	Mon.	Tue.	Wed.
Waleed	4	4	3	4	5
Hesham	3	2	1	2	3

Represent these data by using double bars graph.

22 El-Fayoum Governorate

Directorate of Education
Supervisors of Mathematics

Answer the following questions :

1 ***Complete each of the following :***

[a] The number 4.7 = 0.7 + ...

[b] 236 ≃ .... (to the nearest ten)

[c] The equilateral triangle has .... lines of symmetry.

[d] The two squares are congruent if their side length are ....

2 ***Choose the correct answer :***

[a] The number $\frac{18}{4}$ = ... ($4\frac{1}{2}$ *or* $4\frac{2}{3}$ *or* $4\frac{1}{4}$ *or* $2\frac{1}{4}$)

[b] 5 470 ÷ 100 = ... (5.47 *or* 54.7 *or* 547 *or* 5470)

[c] A box contains 3 blue balls and 6 red balls , if a ball is drawn , the probability of drawing blue ball = ... ($\frac{1}{2}$ *or* $\frac{1}{3}$ *or* 1 *or* zero)

[d] The place value of the digit (5) in the number 9.5 is ....
(hundreds *or* units *or* tens *or* tenths)

3 ***Put the suitable relation (< , > or =) :***

[a] 750 millilitres ☐ 3 litres **[b]** 3 hours ☐ 150 minutes

[c] The probability of the impossible event ☐ zero

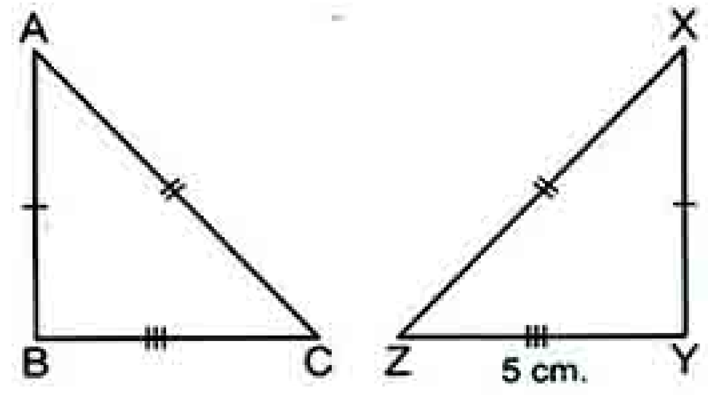
[d] 600 gm. ☐ $\frac{1}{2}$ kg.

4 **[a]** ***Find the result of the following :***

(1) 95.7 + 62.31 = ... ≃ .... (to the nearest $\frac{1}{10}$)

(2) 5.63 + 11.25 = ... ≃ .... (to the nearest unit)

[b] ***In the opposite figure :***



If △ ABC ≡ △ XYZ and ZY = 5 cm.

Complete :

(1) $\overline{XY}$ ≡ ....

(2) $\overline{AC}$ ≡ ....

(3) ∠ B ≡ ∠ .... **(4)** BC = ... cm.

5 **[a]** ***Arrange the following numbers in an ascending order :***

0.45 , 5.4 , 4.5 and 0.54

[b] ***From the following table , represent the data by double bars graph :***

Name \ Number of hours	First	Second	Third
Ahmed	3	4	5
Ali	4	5	4

23 Beni Suef Governorate

Directorate of Education
Dir. of Official Lang. Schools

Answer the following questions :

1 ***Complete each of the following :***

[a] 87.5 – 17.45 ≃ .... (to the nearest one decimal)

[b] The event that the sun rises from the east is .... event.

[c] The two polygons are congruent if their corresponding sides are ....

[d] Twenty nine thousandths is written in digits as ....

2 ***Choose the correct answer :***

[a] The probability of the impossible event = ...

(0 *or* 1 *or* 2 *or* 3)

[b] $25\frac{1}{3}$ kg. ≃ .... kg. (to the nearest kg.)

(26 *or* 24 *or* 25 *or* $\frac{76}{3}$)

[c] The isosceles triangle has .... line of symmetry.
(1 *or* 0 *or* 2 *or* 3)

[d] 3 750 cm. = ... m. (3.75 *or* 373 *or* 375 000 *or* 37.5)

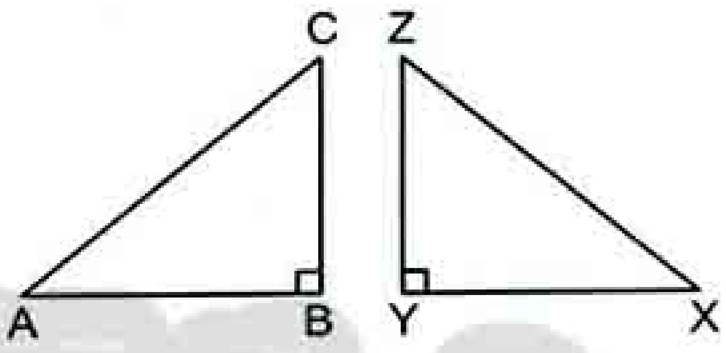
3 ***Put the suitable relation (< , > or =) :***

[a] The quarter of a day ☐ 3 hours **[b]** 800 ÷ 100 ☐ 785 ÷ 10

[c] 9.7 L ☐ 9.7 dm³ **[d]** $4\frac{1}{5}$ ☐ 4.3

4 **[a]** If Amr has 322 pounds and his brother Mohamed has 85.75 pounds.
Find the difference between what they have.

[b] ***From the opposite figure :***



If $\triangle ABC \equiv \triangle XYZ$, then complete :

(1) $\overline{AB} \equiv$ .... **(2)** $\overline{BC} \equiv$ ....

(3) $\overline{AC} \equiv$ .... **(4)** $\angle B \equiv \angle$ ....

5 **[a]** ***Find the result :***

(1) 95.7 – 62.31 = ... ≃ .... (to the nearest one decimal)

(2) 8 7510 ÷ 1 000 = ... ≃ .... (to the nearest unit)

[b] ***The following table shows the number of travellers in the first four carriages of a train :***

Carriage	1st	2nd	3rd	4th
Number of travellers	50	60	95	70

Represent these data by a histogram.

24 Assiut Governorate

Assiut Educational Administration
Maths Inspection

Answer the following questions :

1 ***Choose the correct answer :***

[a] $6\frac{8}{100}$ = ... (6.8 *or* 0.68 *or* 6.08)

[b] The square has .... lines of symmetry. (2 *or* 3 *or* 4)

[c] 3 tons. = ... kg. (30 *or* 300 *or* 3000)

[d] The probability of the impossible event = ... (1 *or* 0 *or* 2)

2 ***Complete :***

[a] $\frac{2}{5} + \frac{3}{7} =$ ....

[b] 2 hours = ... minutes.

[c] The two polygons are congruent if their corresponding .... are equal in length and their corresponding .... are equal in measure.

[d] 35 liters = ... millilitres.

3 ***Find the result :***

[a] 24.43 + 12.51 = ... ≃ .... (to the nearest ten)

[b] 52.46 – 2.731 = ... ≃ .... (to the nearest unit)

[c] 12 345 ÷ 100 = ... ≃ .... (to the nearest tenth)

[d] $\frac{30}{7} =$ .... (as a mixed number)

4 [a] Marina has 35 pounds. She bought a ball for 9.75 pounds.

What it the remainder with her ?

[b] A box contains 5 red balls and 4 blue of the same size. ***Complete :***

(1) The probability of getting a red ball = ...

(2) The probability of getting a blue ball = ...

5 ***Represent the data of the following table by a histogram :***

Activity	Sport	Art	Culture
Number of pupils	30	50	70

25 Souhag Governorate

Directorate of Education
Maths Inspection

Answer the following questions :

1 ***Complete each of the following :***

[a] 1 = 0.7 + ...

[b] 20 litres = ... millilitres.

[c] 5.63 ≃ .... (to the nearest tenth)

[d] 3 tons = ... kg.

2 ***Put (> , < or =) :***

[a] Number of lines of symmetry of the square ☐ Number of lines of symmetry of rhombus.

[b] 550 millilitres ☐ 6 litres

[c] 1 week ☐ 5 days

[d] The probability of impossible event ☐ The probability of the certain event.

---

3 **[a]** ***Arrange in a descending order :*** 36.31 , 16.28 , 74.1 and 23.153

[b] A box contains 5 blue balls , two red balls and 3 green balls , if a ball is drawn blindly. Complete :

(1) The probability that the drawn ball is red = ...

(2) The probability that the drawn ball is green = ...

---

4 **[a]** Mazen has 35 pounds. He bought a ball for 9.75 pounds and a book for 5.25 pounds. What is the remained with Mazen ?

[b] ***Choose the correct answer :***

(1) $457\frac{1}{5} \simeq$ .... (to the nearest whole number)
(457 ***or*** 458 ***or*** 455 ***or*** 659)

(2) The number of lines of symmetry of the rectangle is ....
(zero ***or*** 4 ***or*** 2 ***or*** 3)

(3) $236 \simeq$ .... (to the nearest ten) (230 ***or*** 240 ***or*** 250 ***or*** 260)

(4) $4\frac{7}{10} + 3.07 =$ .... (7.14 ***or*** 7.4 ***or*** 7.77 ***or*** 7.14)

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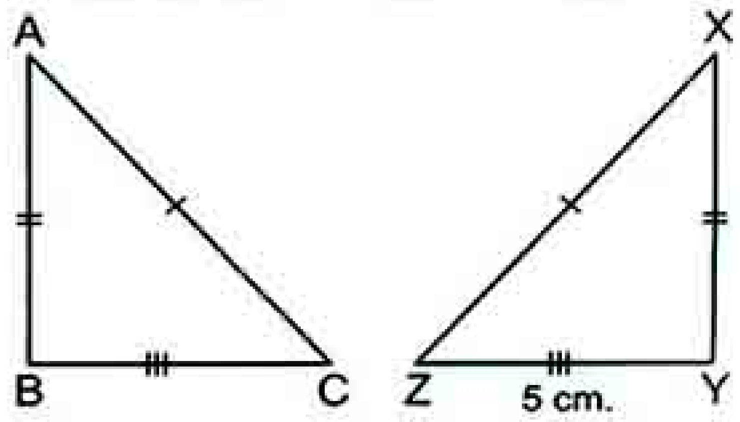
5 **[a]** ***In the opposite figure :***

If $\Delta ABC \equiv \Delta XYZ$, ZY = 5 cm. Complete :



(1) $\overline{XY} \equiv$ ....

(2) $\overline{AC} \equiv$ ....

(3) $\angle B \equiv \angle$ ....

(4) BC = ... cm.

[b] ***The following table shows the number of travellers in the first four carriages of a train :***

Carriage	First	Second	Third	Fourth
Number of travellers	50	60	95	70

Represent these data by a histogram.

26 Luxor Governorate

Directorate of Education
Salam Private School

محافظة الأقصر

Answer the following questions :

1 *Complete the following :*

[a] 0.1 + 0.3 + ………… = 1

[b] ABC ABC ABC ………… (in the same pattern)

[c] 582.6 ≃ ………… (to the nearest whole number)

[d] 3 liters = ………… milliliters.

2 *Choose the correct answer :*

[a] The probability of sure event is ………… (2 **or** 1 **or** 0)

[b] $\frac{3}{8} + \frac{2}{8} = \frac{\cdots\cdots}{8}$ (5 **or** 6 **or** 1)

[c] 4 000 kg. = ………… tons (400 **or** 40 **or** 4)

[d] 13.57 ≃ 10 (to the nearest …………)
(ten **or** whole number **or** tenth)

3 *Put (✓) for the correct statement and (×) for the incorrect one :*

[a] 574 ÷ 100 = 57.4 ( )

[b] 2 days = 48 hours. ( )

[c] Square has 4 lines of symmetry. ( )

[d] The probability of getting an even number when tossing a die once is $\frac{5}{6}$ ( )

4 [a] John has 35 pounds , he bought a shirt for 22.75 pounds ,
How much money left with him ?
The money left = ………………………… = ………… pounds.

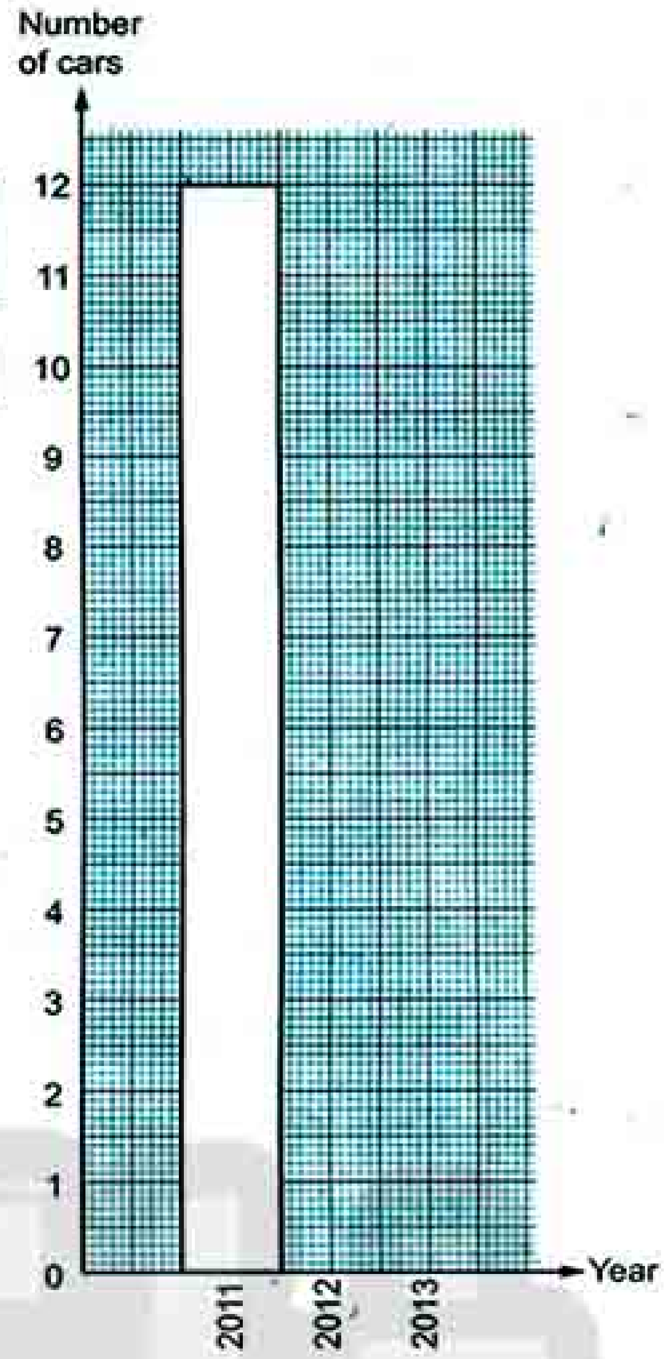
[b] *Write each of the following as an improper fraction :*

(1) $7\frac{1}{2} = \frac{\cdots\cdots}{\cdots\cdots}$ **(2)** $3\frac{1}{5} = \frac{\cdots\cdots}{\cdots\cdots}$

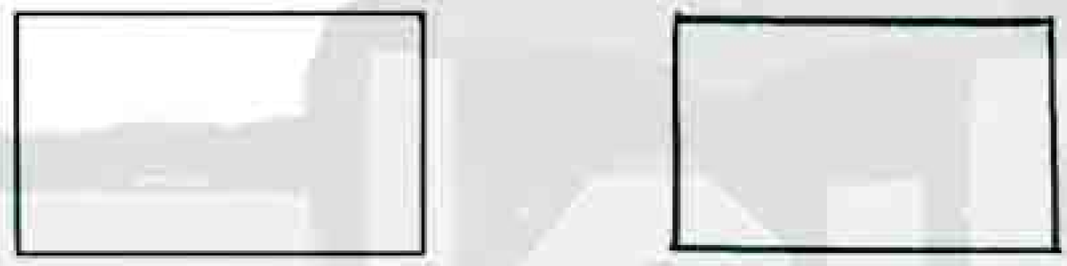
5 **[a]** ***The table below shows the number of cars that a factory produced during some years :***

Year	2011	2012	2013
Number of cars produced	12	8	10

Complete representing these data by a histogram on this chart.



[b] Draw all lines of symmetry for the following rectangle :



27 Aswan Governorate

Directorate of Education
Supervision of Maths

Answer the following questions :

1 ***Complete the following :***

[a] Forty two and three tenths in digits is ....

[b] The two polygons are congruent if their corresponding sides are .... and their corresponding .... are equal in measure.

[c] The millilitre = ... litre.

[d] $\frac{5}{6} - \frac{1}{3} =$ .... (in the simplest form)

2 ***Choose the correct answer :***

[a] 6.8 = 0.8 + ... (2 *or* 4 *or* 6 *or* 8)

[b] The decimal number which included between 0.62 and 0.63 is ....
(0.615 *or* 0.625 *or* 0.635 *or* 0.645)

[c] $7\frac{3}{5} =$ .... (5.6 *or* 6.5 *or* 6.7 *or* 7.6)

[d] The value of the digit 6 in the number 18.36 is ....
(0.06 *or* 0.60 *or* 6 *or* 60)

3 ***Put the suitable relation (> , < or =) :***

[a] Number of lines of symmetry of a square ☐ Number of lines of symmetry of rhombus.

[b] $\frac{3}{4}$ of one hour ☐ 50 minutes

[c] 6.9 + 2.1 ☐ 11.7 – 1.7

[d] 7850 ÷ 100 ☐ 78.5

4 **[a]** ***Complete :*** **(1)** 831.56 ≃ .... (to the nearest tenth)

(2) The number 89.9 ≃ 90 (to the nearest ....)

[b] Mazen has 35 pounds , he bought a ball for 9.75 pounds and a book for 5.25 pounds. How much money was left with him ?

5 **[a]** A box contains (4) blue balls , two red balls and (3) green balls. What is the probability that the chosen ball is blue ?

[b] ***The following table shows the number of pupils in the first four grades in a primary school :***

The grades	First	Second	Third	Fourth
Frequency	80	70	100	70

Represent these data by using a histogram.

28 South Sinai Governorate

Dahab Edu. Adm.
Maths Inspection

Answer the following questions :

1 ***Choose the correct answer :***

[a] 7 342 ≃ 7 300 (to the nearest ....)

(ten ***or*** hundred ***or*** thousand ***or*** ten thousand)

[b] The place value of the digit 3 in the number is 6.135 is ....

(units ***or*** tenths ***or*** hundredths ***or*** thousands)

[c] The decimal number between 0.4 and 0.5 is ....

(0.46 ***or*** 0.38 ***or*** 0.52 ***or*** 0.04)

[d] The probability of getting a head when tossing a coin once is ....

(1 ***or*** $\frac{1}{2}$ ***or*** zero ***or*** $\frac{2}{3}$)

2 ***Complete the following :***

[a] 0.4 + 0.5 + ... = 1

[b] 5 liters = ... cm^3

[c] 7 tons = ... kg.

[d] 74.36 ≃ .... (to the nearest tenth)

3 ***Find the following :***

[a] (1) $\frac{1}{4} + \frac{3}{4} = \frac{\dots\dots}{\dots\dots} = \dots\dots$

(2) 37.85 + 34.63 = ... ≃ .... (to the nearest unit)

[b] Yousef has 48.5 pounds , if he bought a shirt for 36.75 pounds. Find the remainder with him.

4 [a] ***Put (> , < or =) :***

(1) 3 tons ☐ 300 kg. **(2)** 5000 gm. ☐ 520 kg.

(3) $4\frac{3}{4}$ pounds ☐ 475 piastres

[d] ***Arrange the following numbers in an ascending order :***

5.8 , 5.08 , 58 and 8.5

[c] ***Put (✓) or (✗) :***

(1) The square has 4 lines of symmetry. ( )

(2) Two polygons are congruent if their corresponding sides and corresponding angles are parallel. ( )

5 **[a]** A box contains 8 blue balls , 2 white balls and 5 yellow balls , if one ball is drawn randomly , then find the probability of the drawn ball is white.

[b] ***The following table represents the number of absent students from grade four and grade five in 4 days :***

Grade \ Day	First	Second	Third	Fourth
4^{th} grade	8	7	6	5
5^{th} grade	6	4	8	5

Represent using the double bars.

29 Red Sea Governorate

Quesseir Educational Administration
Quesseir Governmental School

Answer the following questions :

1 ***Complete :***

[a] 4.7 = 0.7 + ... **[b]** 7 345 ≃ .... (to the nearest ten)

[c] The two squares are congruent if the side length of one them = ...

[d] 214 ÷ 10 = ...

2 Choose the correct answer :

[a] The probability of the odd number appeares on the upper face of the dice = …………… ($\frac{1}{2}$ *or* $\frac{1}{6}$ *or* $\frac{1}{3}$ *or* 0)

[b] The value of the digit 3 in the number 6.135 is …………… (30 *or* 0.3 *or* 0.03 *or* 0.003)

[c] The number of lines of symmetry of the rectangle is …………… (0 *or* 2 *or* 3 *or* 4)

[d] 29.095 ≃ …………… (to the nearest tenth) (29.1 *or* 30 *or* 29 *or* 29.11)

3 Put the suitable the relation (> , = or <) :

[a] 608 ÷ 10 ☐ 608 × 10 **[b]** 1.08 ☐ 1.8

[c] 48 hours ☐ two days **[d]** 0.6 ☐ $\frac{3}{5}$

4 [a] Arrange the following numbers in an ascending order :

5.8 , 5.08 , 58 and 8.5

[b] ***Find the result :***

(1) 24 819 ÷ 1 000 ≃ …………… (to the nearest unit)

(2) 5.98 + 10.237 = ……………

5 [a] Ahmed has L.E. 42.5 and his sister Alaa has L.E. 9.7

Find the difference between what they have.

[b] ***Represent these data by the histogram :***

The activity	First	Second	Third	Fourth
Number of pupils	10	12	18	10

30 Matrouh Governorate

Directorate of Education
Supervision of Maths

Answer the following questions :

1 Complete the following :

[a] 1 ton = …………… kg.

[b] 86.7 – 17.45 ≃ …………… (to the nearest $\frac{1}{10}$)

[c] 4 litres = …………… millilitres.

[d] 4 285 ÷ 100 = …………… ≃ …………… (to the nearest $\frac{1}{10}$)

2 ***Choose the correct answer :***

[a] The probability of the certain event = ...

(zero ***or*** 0.5 ***or*** 1 ***or*** 2)

[b] Two and half hours = ... minutes.

(90 ***or*** 100 ***or*** 150 ***or*** 250)

[c] The value of the digit (3) in the number 54.238 = ...

(0.3 ***or*** 0.03 ***or*** 3 ***or*** 0.003)

[d] The square has .... lines of symmetry. (1 ***or*** 2 ***or*** 3 ***or*** 4)

---

3 **[a]** ***Arrange the following numbers in an ascending order :***

0.45 , 5.4 , 4.5 and 0.54

[b] Mazen has 35 pounds. He bought a ball for 9.75 pounds and a book for 5.25 pounds. What is the remained with Mazen ?

---

4 **[a]** A box contains 8 red balls , two white balls and 5 yellow balls. What is the probability that the drawn ball is white ?

[b] ***Find the result :***

(1) 5.98 + 10.237 = ...

(2) 14.017 – 4.97 = ...

---

5 **[a]** ***The following table shows the number of participants in the school activities in a school :***

The activity	Sports	Social	Art
Number of pupils	16	12	14

Represent these data by a histogram.

[b] ***Put the suitable relation (> , < or =) :***

(1) 4 ☐ 0.06

(2) 608 ÷ 10 ☐ 608 × 10

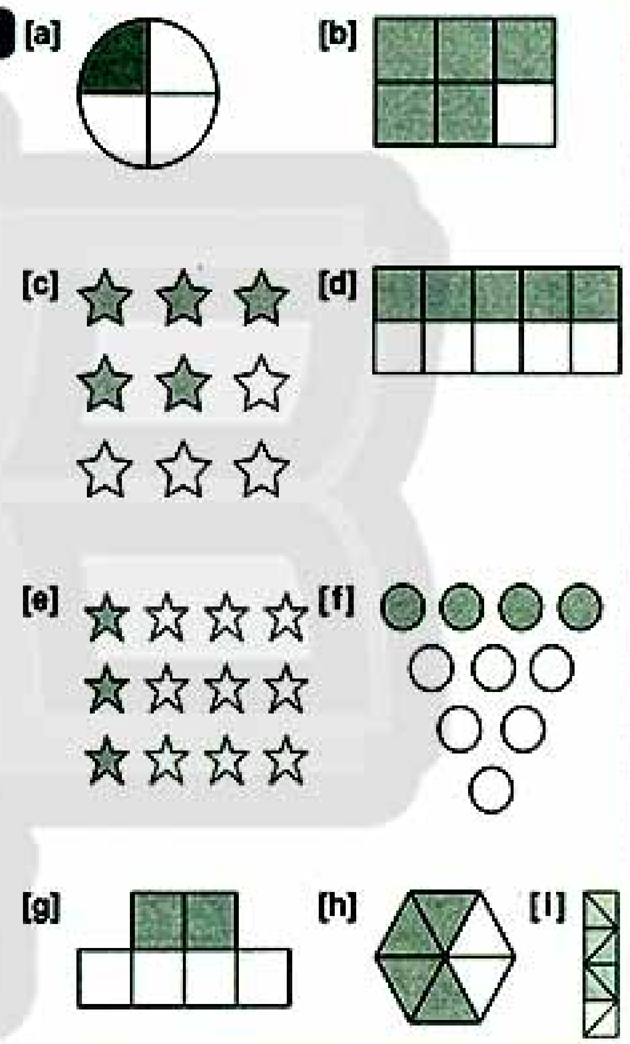
Guide Answers of the Main Book

Unit One

Exercise 1

1 [a] $\frac{5}{7}$ [b] $\frac{2}{3}$ [c] $\frac{2}{6}$ [d] $\frac{5}{9}$
[e] $\frac{7}{10}$ [f] $\frac{3}{8}$ [g] $\frac{8}{16}$ [h] $\frac{2}{6}$
[i] $\frac{1}{8}$ [j] $\frac{1}{5}$ [k] $\frac{1}{4}$

2 [a] [b] [c] [d] [e] [f] [g] [h] [i]



3

What part(s) is (are) blue ?	$\frac{1}{8}$	$\frac{2}{6}$	$\frac{5}{10}$
What part(s) is (are) yellow ?	$\frac{5}{8}$	$\frac{1}{6}$	$\frac{3}{10}$
What parts are pink ?	$\frac{2}{8}$	$\frac{3}{6}$	$\frac{2}{10}$
What parts are pink or blue ?	$\frac{3}{8}$	$\frac{5}{6}$	$\frac{7}{10}$
What parts are not blue ?	$\frac{7}{8}$	$\frac{4}{6}$	$\frac{5}{10}$

4

	Numerator	Denominator	The fraction is	Read as
[a]	2	5	$\frac{2}{5}$	Two fifths
[b]	2	3	$\frac{2}{3}$	Two thirds
[c]	5	6	$\frac{5}{6}$	Five sixths
[d]	3	10	$\frac{3}{10}$	Three tenths
[e]	3	8	$\frac{3}{8}$	Three eighths
[f]	2	9	$\frac{2}{9}$	Two ninths

5 [a] $\frac{2}{4}$ [b] $\frac{4}{6}$ [c] $\frac{6}{10}$ [d] $\frac{4}{8}$
[e] $\frac{3}{6}$ [f] $\frac{2}{10}$ [g] $\frac{5}{10}$ [h] $\frac{4}{10}$

6 [a] $1 = \frac{3}{3} = \frac{8}{8} = \frac{10}{10} = \frac{5}{5}$
[b] $\frac{1}{2} = \frac{5}{10} = \frac{3}{6} = \frac{6}{12} = \frac{10}{20}$
[c] $\frac{1}{3} = \frac{2}{6} = \frac{3}{9} = \frac{5}{15} = \frac{9}{27} = \frac{10}{30}$
[d] $\frac{2}{5} = \frac{4}{10} = \frac{6}{15} = \frac{10}{25} = \frac{18}{45} = \frac{20}{50}$
[e] $\frac{3}{4} = \frac{6}{8} = \frac{9}{12} = \frac{15}{20} = \frac{30}{40}$
[f] $\frac{4}{7} = \frac{12}{21} = \frac{20}{35} = \frac{8}{14} = \frac{44}{77}$

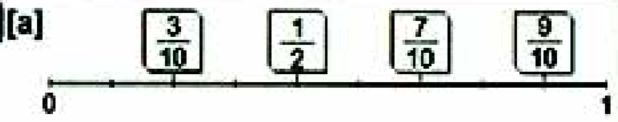
7 [a] $\frac{15}{5} = \frac{3}{1} = 3$ [b] $\frac{30}{10} = \frac{3}{1} = 3$
[c] $\frac{50}{10} = \frac{5}{1} = 5$ [d] $\frac{6}{2} = \frac{3}{1} = 3$
[e] $\frac{20}{5} = \frac{4}{1} = 4$ [f] $\frac{28}{7} = \frac{4}{1} = 4$
[g] $\frac{30}{5} = \frac{6}{1} = 6$ [h] $\frac{80}{8} = \frac{10}{1} = 10$
[i] $\frac{48}{3} = \frac{16}{1} = 16$ [j] $\frac{90}{3} = \frac{30}{1} = 30$
[k] $\frac{54}{6} = \frac{9}{1} = 9$ [l] $\frac{42}{7} = \frac{6}{1} = 6$

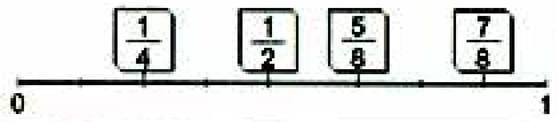
8 [a] $\frac{1}{2} = \frac{5}{10}$ [b] $\frac{5}{15} = \frac{1}{3}$ [c] $\frac{3}{5} = \frac{9}{15}$
[d] $\frac{8}{9} = \frac{48}{54}$ [e] $\frac{16}{18} = \frac{8}{9}$ [f] $\frac{5}{7} = \frac{30}{42}$
[g] $\frac{2}{13} = \frac{4}{26}$ [h] $\frac{4}{9} = \frac{32}{72}$

9 [a] $\frac{1}{2}$ [b] $\frac{1}{3}$ [c] $\frac{1}{2}$ [d] $\frac{2}{3}$
[e] $\frac{1}{4}$ [f] $\frac{2}{7}$ [g] $\frac{2}{7}$ [h] $\frac{1}{3}$
[i] $\frac{5}{9}$ [j] $\frac{1}{4}$ [k] $\frac{5}{8}$ [l] $\frac{1}{9}$
[m] $\frac{2}{7}$ [n] $\frac{8}{9}$ [o] $\frac{2}{5}$

10 [a] < [b] < [c] > [d] <
[e] < [f] = [g] = [h] =
[i] > [j] < [k] < [l] >

11 [a] The order is : $\frac{2}{10}$, $\frac{3}{10}$, $\frac{5}{10}$ and $\frac{9}{10}$
[b] The order is : $\frac{1}{9}$, $\frac{3}{9}$, $\frac{5}{9}$ and $\frac{6}{9}$
[c] The order is : $\frac{2}{7}$, $\frac{3}{7}$, $\frac{5}{7}$ and 1
[d] The order is : $\frac{8}{12}$, $\frac{3}{4}$, $\frac{10}{12}$ and $\frac{11}{12}$
[e] The order is : $\frac{1}{8}$, $\frac{3}{8}$, $\frac{1}{2}$ and 1

12 [a]


[b]


13 [a] $\frac{3}{5}$ [b] $\frac{6}{7}$ [c] $\frac{2}{9}$ [d] $\frac{3}{11}$
[e] $\frac{4}{7}$ [f] $\frac{1}{5}$ [g] $\frac{3}{7}$ [h] $\frac{1}{4}$
[i] $\frac{3}{4}$ [j] $\frac{4}{5}$

Exercise 2

1 [a] × [b] ✓ [c] × [d] ✓ [e] ✓ [f] ×

2 [a] Proper fraction. [b] Improper fraction.
[c] Improper fraction. [d] Proper fraction.
[e] Mixed number. [f] Mixed number.

3 [a] $2\frac{1}{5} = \frac{11}{5}$ [b] $3\frac{1}{4} = \frac{13}{4}$
[c] $3\frac{3}{8} = \frac{27}{8}$ [d] $2\frac{7}{8} = \frac{23}{8}$
[e] $1\frac{4}{7} = \frac{11}{7}$ [f] $2\frac{1}{6} = \frac{13}{6}$

4 [a] $\frac{8}{1}$ [b] $\frac{6}{2}$ [c] $\frac{9}{3}$ [d] $\frac{10}{2}$
[e] 1 [f] $\frac{18}{6}$ [g] $\frac{50}{5}$ [h] $\frac{33}{3}$
[i] $\frac{70}{10}$ [j] 4 [k] $\frac{12}{6}$ [l] $\frac{36}{6}$

5 [a] $\frac{65}{9} = \frac{63}{9} + \frac{2}{9} = 7 + \frac{2}{9} = 7\frac{2}{9}$
[b] $\frac{47}{8} = \frac{40}{8} + \frac{7}{8} = 5 + \frac{7}{8} = 5\frac{7}{8}$

[c] $\frac{87}{7} = \frac{84}{7} + \frac{3}{7} = 12 + \frac{3}{7} = 12\frac{3}{7}$
[d] $\frac{57}{5} = \frac{55}{5} + \frac{2}{5} = 11 + \frac{2}{5} = 11\frac{2}{5}$

6 [a] $\frac{9}{2}$ [b] $\frac{7}{2}$ [c] $\frac{13}{4}$ [d] $\frac{21}{2}$
[e] $\frac{11}{5}$ [f] $\frac{19}{5}$ [g] $\frac{31}{6}$ [h] $\frac{58}{7}$
[i] $\frac{85}{11}$ [j] $\frac{41}{10}$ [k] $\frac{67}{12}$

7 [a] $1\frac{1}{4}$ [b] $1\frac{1}{10}$ [c] $4\frac{1}{4}$ [d] $2\frac{3}{8}$
[e] $4\frac{1}{2}$ [f] $6\frac{1}{7}$ [g] $6\frac{1}{6}$ [h] $6\frac{3}{10}$
[i] $\frac{11}{3} = 3\frac{2}{3}$ [j] $\frac{5}{3} = 1\frac{2}{3}$
[k] $\frac{5}{4} = 1\frac{1}{4}$

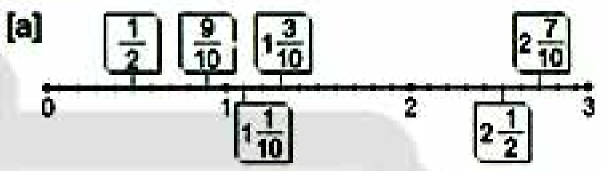
8 [a] > [b] > [c] < [d] > [e] >
[f] < [g] > [h] > [i] = [j] <
[k] < [l] >

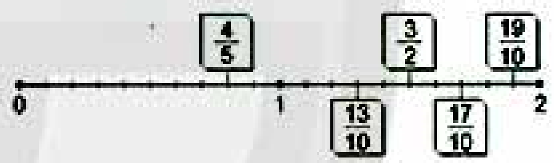
9 [a] $\frac{7}{3} = \frac{35}{15}$, $\frac{4}{5} = \frac{12}{15}$, then $\frac{7}{3} > \frac{4}{5}$
[b] $\frac{5}{6} = \frac{20}{24}$, $\frac{7}{8} = \frac{21}{24}$, then $\frac{5}{6} < \frac{7}{8}$
[c] $\frac{5}{6} = \frac{10}{12}$, then $\frac{7}{12} < \frac{5}{6}$
[d] $\frac{8}{9} = \frac{80}{90}$, $\frac{9}{10} = \frac{81}{90}$, then $\frac{8}{9} < \frac{9}{10}$
[e] $\frac{3}{7} = \frac{18}{42}$, then $\frac{5}{42} < \frac{3}{7}$
[f] $\frac{5}{2} = 2\frac{1}{2}$, then $2\frac{3}{4} > 2\frac{1}{2}$
[g] $2\frac{7}{9} = 2\frac{35}{45}$, $2\frac{3}{5} = 2\frac{27}{45}$, then $2\frac{7}{9} > 2\frac{3}{5}$
[h] $5\frac{6}{7} = 5\frac{48}{56}$, $5\frac{7}{8} = 5\frac{49}{56}$, then $5\frac{6}{7} > 5\frac{7}{8}$

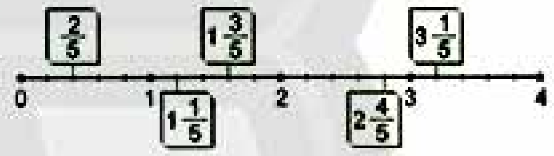
10 [a] $\frac{3}{5} = \frac{9}{15}$, $\frac{2}{3} = \frac{10}{15}$
Then the order is : $\frac{7}{15}$, $\frac{3}{5}$ and $\frac{2}{3}$
[b] $\frac{1}{3} = \frac{4}{12}$, $\frac{3}{4} = \frac{9}{12}$, $\frac{5}{6} = \frac{10}{12}$
Then the order is : $\frac{1}{3}$, $\frac{7}{12}$, $\frac{3}{4}$ and $\frac{5}{6}$
[c] $\frac{2}{3} = \frac{24}{36}$, $\frac{8}{9} = \frac{32}{36}$, $\frac{5}{12} = \frac{15}{36}$
Then the order is : $\frac{11}{36}$, $\frac{5}{12}$, $\frac{2}{3}$ and $\frac{8}{9}$
[d] $\frac{15}{8} = \frac{45}{24}$, $1\frac{1}{6} = \frac{7}{6} = \frac{28}{24}$, $1\frac{11}{12} = \frac{23}{12} = \frac{46}{24}$
Then the order is : $1\frac{1}{6}$, $\frac{31}{24}$, $\frac{15}{8}$ and $1\frac{11}{12}$

11 [a] $\frac{3}{7} = \frac{9}{21}$, $\frac{1}{3} = \frac{7}{21}$
Then the order is : $\frac{3}{7}$, $\frac{1}{3}$ and $\frac{5}{21}$

[b] $\frac{2}{3} = \frac{16}{24}$, $\frac{3}{8} = \frac{9}{24}$, $\frac{1}{6} = \frac{4}{24}$, $\frac{5}{12} = \frac{10}{24}$
Then the order is : $\frac{2}{3}$, $\frac{5}{12}$, $\frac{3}{8}$ and $\frac{1}{6}$
[c] $\frac{3}{5} = \frac{12}{20}$, $\frac{1}{2} = \frac{10}{20}$, $\frac{9}{10} = \frac{18}{20}$, $\frac{1}{4} = \frac{5}{20}$
Then the order is : $\frac{9}{10}$, $\frac{3}{5}$, $\frac{1}{2}$ and $\frac{1}{4}$
[d] $\frac{3}{2} = \frac{72}{48}$, $1\frac{3}{8} = \frac{11}{8} = \frac{66}{48}$, $\frac{31}{16} = \frac{93}{48}$
, $\frac{23}{24} = \frac{46}{48}$
Then the order is : $\frac{31}{16}$, $\frac{3}{2}$, $1\frac{3}{8}$ and $\frac{23}{24}$

12 [a]


[b]


[c]


13 [a] $\frac{5}{9} + \frac{3}{9} + \frac{4}{9} = \frac{12}{9} = \frac{4}{3} = 1\frac{1}{3}$
[b] $\frac{3}{8} + \frac{2}{8} + \frac{4}{8} = \frac{9}{8} = 1\frac{1}{8}$
[c] $\frac{2}{11} + \frac{5}{11} + \frac{7}{11} = \frac{14}{11} = 1\frac{3}{11}$
[d] $\frac{2}{3} + \frac{4}{3} + \frac{1}{3} = \frac{7}{3} = 2\frac{1}{3}$
[e] $\left(\frac{4}{7} + \frac{5}{7}\right) - \frac{1}{7} = \frac{9}{7} - \frac{1}{7} = \frac{8}{7} = 1\frac{1}{7}$
[f] $\left(\frac{8}{15} + \frac{13}{15}\right) - \frac{4}{15} = \frac{21}{15} - \frac{4}{15} = \frac{17}{15} = 1\frac{2}{15}$
[g] $\left(\frac{3}{5} + \frac{6}{5}\right) + 1 = \frac{9}{5} + 1 = \frac{9}{5} + \frac{5}{5} = \frac{14}{5} = 2\frac{4}{5}$
[h] $\left(\frac{7}{9} - \frac{2}{9}\right) + \frac{4}{9} = \frac{5}{9} + \frac{4}{9} = \frac{9}{9} = 1$

Exercise 3

1 [a] $\frac{1}{3} + \frac{1}{4} = \frac{4}{12} + \frac{3}{12} = \frac{7}{12}$
[b] $\frac{1}{5} + \frac{1}{3} = \frac{3}{15} + \frac{5}{15} = \frac{8}{15}$
[c] $\frac{1}{2} + \frac{1}{7} = \frac{7}{14} + \frac{2}{14} = \frac{9}{14}$
[d] $\frac{1}{4} + \frac{1}{8} = \frac{2}{8} + \frac{1}{8} = \frac{3}{8}$
[e] $\frac{1}{6} + \frac{1}{8} = \frac{4}{24} + \frac{3}{24} = \frac{7}{24}$

[f] $\frac{3}{7} + \frac{1}{6} = \frac{18}{42} + \frac{7}{42} = \frac{25}{42}$
[g] $\frac{2}{3} + \frac{3}{4} = \frac{8}{12} + \frac{9}{12} = \frac{17}{12} = 1\frac{5}{12}$
[h] $\frac{3}{7} + \frac{4}{5} = \frac{15}{35} + \frac{28}{35} = \frac{43}{35} = 1\frac{8}{35}$
[i] $\frac{1}{4} + \frac{3}{10} = \frac{5}{20} + \frac{6}{20} = \frac{11}{20}$
[j] $\frac{7}{8} + \frac{5}{6} = \frac{21}{24} + \frac{20}{24} = \frac{41}{24} = 1\frac{17}{24}$
[k] $\frac{2}{3} + \frac{7}{8} = \frac{16}{24} + \frac{21}{24} = \frac{37}{24} = 1\frac{13}{24}$
[l] $\frac{5}{9} + \frac{2}{5} = \frac{25}{45} + \frac{18}{45} = \frac{43}{45}$

2 [a] $\frac{1}{3} - \frac{1}{5} = \frac{5}{15} - \frac{3}{15} = \frac{2}{15}$
[b] $\frac{5}{6} - \frac{1}{2} = \frac{5}{6} - \frac{3}{6} = \frac{2}{6} = \frac{1}{3}$
[c] $\frac{5}{6} - \frac{1}{3} = \frac{5}{6} - \frac{2}{6} = \frac{3}{6} = \frac{1}{2}$
[d] $\frac{1}{4} - \frac{1}{5} = \frac{5}{20} - \frac{4}{20} = \frac{1}{20}$
[e] $\frac{4}{7} - \frac{1}{3} = \frac{12}{21} - \frac{7}{21} = \frac{5}{21}$
[f] $\frac{2}{3} - \frac{1}{6} = \frac{4}{6} - \frac{1}{6} = \frac{3}{6} = \frac{1}{2}$
[g] $\frac{2}{5} - \frac{1}{10} = \frac{4}{10} - \frac{1}{10} = \frac{3}{10}$
[h] $\frac{4}{5} - \frac{1}{4} = \frac{16}{20} - \frac{5}{20} = \frac{11}{20}$
[i] $\frac{9}{10} - \frac{3}{5} = \frac{9}{10} - \frac{6}{10} = \frac{3}{10}$
[j] $\frac{5}{6} - \frac{2}{3} = \frac{5}{6} - \frac{4}{6} = \frac{1}{6}$
[k] $\frac{7}{8} - \frac{2}{5} = \frac{35}{40} - \frac{16}{40} = \frac{19}{40}$
[l] $\frac{5}{6} - \frac{3}{8} = \frac{20}{24} - \frac{9}{24} = \frac{11}{24}$

3 [a] $\frac{9}{20}$ [b] $\frac{11}{12}$ [c] $\frac{24}{35}$ [d] $\frac{31}{40}$ [e] $\frac{8}{9}$
[f] $\frac{3}{4}$ [g] $\frac{5}{6}$ [h] $\frac{4}{5}$ [i] $7\frac{1}{3}$

4 [a] $3\frac{1}{2} + 2\frac{1}{4} = 3\frac{2}{4} + 2\frac{1}{4} = 5\frac{3}{4}$
[b] $3\frac{1}{4} + 7\frac{1}{3} = 3\frac{3}{12} + 7\frac{4}{12} = 10\frac{7}{12}$
[c] $4\frac{1}{7} + 2\frac{1}{2} = 4\frac{2}{14} + 2\frac{7}{14} = 6\frac{9}{14}$
[d] $6\frac{1}{6} + 7\frac{1}{7} = 6\frac{7}{42} + 7\frac{6}{42} = 13\frac{13}{42}$
[e] $9\frac{2}{3} + 8\frac{1}{5} = 9\frac{10}{15} + 8\frac{3}{15} = 17\frac{13}{15}$
[f] $6\frac{4}{5} + 4\frac{2}{3} = 6\frac{12}{15} + 4\frac{10}{15} = 10\frac{22}{15} = 11\frac{7}{15}$
[g] $2\frac{5}{6} + \frac{8}{9} = 2\frac{15}{18} + \frac{16}{18} = 2\frac{31}{18} = 3\frac{13}{18}$
[h] $2\frac{1}{2} + \frac{4}{5} = 2\frac{5}{10} + \frac{8}{10} = 2\frac{13}{10} = 3\frac{3}{10}$

5 [a] $4\frac{2}{3} - 2\frac{1}{4} = 4\frac{8}{12} - 2\frac{3}{12} = 2\frac{5}{12}$

[b] $3\frac{1}{5} - 1\frac{1}{6} = 3\frac{6}{30} - 1\frac{5}{30} = 2\frac{1}{30}$

[c] $10\frac{1}{2} - 5\frac{1}{3} = 10\frac{3}{6} - 5\frac{2}{6} = 5\frac{1}{6}$

[d] $9\frac{3}{7} - 4\frac{1}{6} = 9\frac{18}{42} - 4\frac{7}{42} = 5\frac{11}{42}$

[e] $8\frac{11}{12} - 7\frac{3}{4} = 8\frac{11}{12} - 7\frac{9}{12} = 1\frac{2}{12} = 1\frac{1}{6}$

[f] $10\frac{1}{4} - 3\frac{1}{12} = 10\frac{3}{12} - 3\frac{1}{12} = 7\frac{2}{12} = 7\frac{1}{6}$

[g] $5\frac{5}{8} - 1\frac{1}{3} = 5\frac{15}{24} - 1\frac{8}{24} = 4\frac{7}{24}$

[h] $9\frac{1}{6} - 4\frac{4}{9} = 9\frac{3}{18} - 4\frac{8}{18} = 8\frac{21}{18} - 4\frac{8}{18}$
$= 4\frac{13}{18}$

[i] $4\frac{1}{2} - \frac{1}{4} = 4\frac{2}{4} - \frac{1}{4} = 4\frac{1}{4}$

[j] $7 - \frac{1}{7} = 6\frac{7}{7} - \frac{1}{7} = 6\frac{6}{7}$

[k] $1\frac{1}{2} - \frac{3}{4} = \frac{3}{2} - \frac{3}{4} = \frac{6}{4} - \frac{3}{4} = \frac{3}{4}$

[l] $1\frac{4}{7} - \frac{10}{21} = 1\frac{12}{21} - \frac{10}{21} = 1\frac{2}{21}$

6 [a] $\frac{1}{4} + \frac{2}{3} + \frac{1}{2} = \frac{3}{12} + \frac{8}{12} + \frac{6}{12} = \frac{17}{12} = 1\frac{5}{12}$

[b] $\frac{1}{5} + \frac{7}{10} + \frac{4}{15} = \frac{6}{30} + \frac{21}{30} + \frac{8}{30} = \frac{35}{30} = \frac{7}{6} = 1\frac{1}{6}$

[c] $2\frac{1}{3} + 3\frac{1}{5} + 7\frac{1}{6} = 2\frac{10}{30} + 3\frac{6}{30} + 7\frac{5}{30}$
$= 12\frac{21}{30} = 12\frac{7}{10}$

[d] $7\frac{1}{4} + \frac{1}{6} + 1\frac{1}{3} = 7\frac{3}{12} + \frac{2}{12} + 1\frac{4}{12}$
$= 8\frac{9}{12} = 8\frac{3}{4}$

[e] $\left(3\frac{3}{4} + 1\frac{7}{8}\right) - 2\frac{5}{6} = \left(3\frac{18}{24} + 1\frac{21}{24}\right) - 2\frac{20}{24}$
$= 4\frac{39}{24} - 2\frac{20}{24} = 2\frac{19}{24}$

[f] $\left(2\frac{2}{3} + \frac{1}{5}\right) - \frac{4}{5} = \left(2\frac{10}{15} + \frac{3}{15}\right) - \frac{12}{15}$
$= 2\frac{13}{15} - \frac{12}{15} = 2\frac{1}{15}$

[g] $\left(6\frac{3}{4} + 2\frac{1}{8}\right) - 7\frac{1}{2} = \left(6\frac{6}{8} + 2\frac{1}{8}\right) - 7\frac{4}{8}$
$= 8\frac{7}{8} - 7\frac{4}{8} = 1\frac{3}{8}$

[h] $\left(8\frac{3}{4} - 2\frac{1}{2}\right) + 3\frac{1}{8} = \left(8\frac{6}{8} - 2\frac{4}{8}\right) + 3\frac{1}{8}$
$= 6\frac{2}{8} + 3\frac{1}{8} = 9\frac{3}{8}$

[i] $\left(3\frac{1}{4} + 1\frac{1}{3}\right) - \frac{15}{12} = \left(3\frac{3}{12} + 1\frac{4}{12}\right) - 1\frac{3}{12}$
$= 4\frac{7}{12} - 1\frac{3}{12} = 3\frac{4}{12} = 3\frac{1}{3}$

[j] $\left(7\frac{2}{5} + 4\frac{1}{6}\right) - \frac{32}{30} = \left(7\frac{12}{30} + 4\frac{5}{30}\right) - 1\frac{2}{30}$
$= 11\frac{17}{30} - 1\frac{2}{30} = 10\frac{15}{30} = 10\frac{1}{2}$

Word Problems

[a] The number of hours $= 6\frac{1}{3} + 8\frac{1}{2}$
$= 6\frac{2}{6} + 8\frac{3}{6} = 14\frac{5}{6}$ hours

[b] (1) $13\frac{1}{3} - 10\frac{1}{2} = 13\frac{2}{6} - 10\frac{3}{6} = 12\frac{8}{6} - 10\frac{3}{6}$
$= 2\frac{5}{6}$ hours

(2) $8 - 5\frac{1}{3} = 7\frac{3}{3} - 5\frac{1}{3} = 2\frac{2}{3}$ hours

(3) $\left(5\frac{1}{2} + 4\frac{2}{3}\right) - 8 = \left(5\frac{3}{6} + 4\frac{4}{6}\right) - 7\frac{6}{6}$
$= 9\frac{7}{6} - 7\frac{6}{6} = 2\frac{1}{6}$ hours

[c] The remainder $= 10 - \left(3\frac{1}{4} + 2\frac{1}{4}\right) = 10 - 5\frac{2}{4}$
$= 10 - 5\frac{1}{2} = 9\frac{2}{2} - 5\frac{1}{2} =$ L.E. $4\frac{1}{2}$

Exercise 4

1 [a] 7.2 [b] 5.1 [c] 8.7
[d] 0.4 [e] 0.1 [f] 15.3
[g] 45.8 [h] 10.7 [i] 142.5

2 [a] $9\frac{4}{10}$ [b] $1\frac{2}{10}$ [c] $6\frac{7}{10}$
[d] $\frac{3}{10}$ [e] $97\frac{1}{10}$ [f] $345\frac{7}{10}$

3 [a] $\frac{9 \times 5}{2 \times 5} = \frac{45}{10} = 4.5$ [b] $\frac{7 \times 5}{2 \times 5} = \frac{35}{10} = 3.5$

[c] $\frac{9 \times 2}{5 \times 2} = \frac{18}{10} = 1.8$ [d] $\frac{1 \times 5}{2 \times 5} = \frac{5}{10} = 0.5$

[e] $\frac{15 \times 5}{2 \times 5} = \frac{75}{10} = 7.5$

[f] $4\frac{3 \times 2}{5 \times 2} = 4\frac{6}{10} = 4.6$

[g] $248\frac{1 \times 5}{2 \times 5} = 248\frac{5}{10} = 248.5$

[h] $\frac{14}{20} = \frac{14 \div 2}{20 \div 2} = \frac{7}{10} = 0.7$

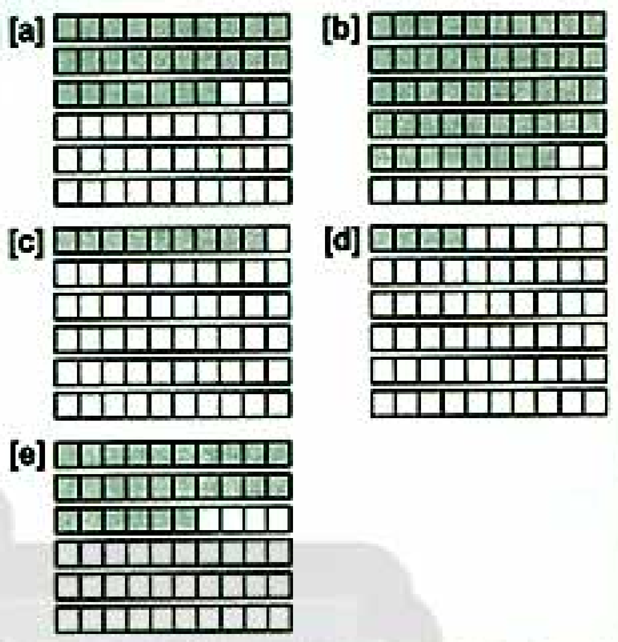
[i] $\frac{15}{50} = \frac{15 \div 5}{50 \div 5} = \frac{3}{10} = 0.3$

4 [a] 0.7 [b] 5.8 [c] 18.6
[d] 76.3 [e] 635.9 [f] 940.1
[g] 301.5 [h] 2 716.8

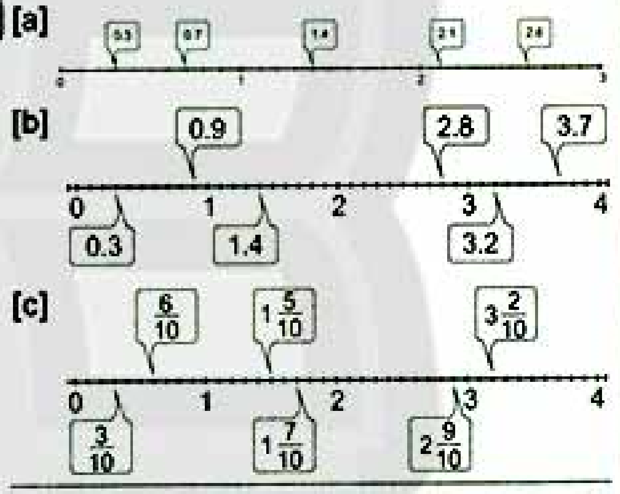
5 [a] Seven and three tenths.
[b] Twenty one and four tenths.
[c] Seven hundred , twenty and six tenths.
[d] One hundred , forty six and seven tenths.
[e] Two tenths.
[f] Two thousand , eight and seven tenths.

6 [a] 1.4 [b] 5.2 [c] 0.6 [d] 2.7 [e] 5.3

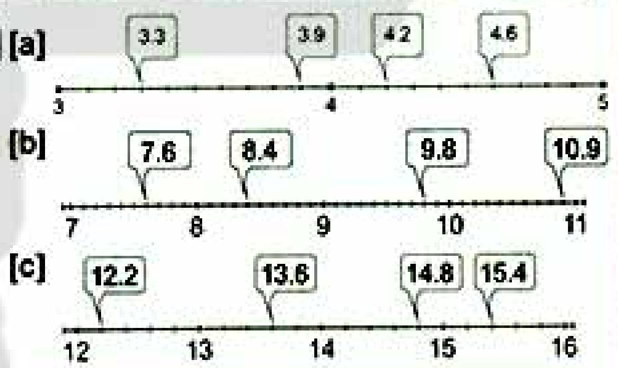
7 [a] [b] [c] [d] [e]



8 [a] [b] [c]



9 [a] [b] [c]



10

	Number	Hundreds	Tens	Units	Tenths
[a]	416.9	4	1	6	9
[b]	51.3	0	5	1	3
[c]	502.7	5	0	2	7
[d]	137	1	3	7	0
[e]	483.1	4	8	3	1
[f]	60.9	0	6	0	9
[g]	700.3	7	0	0	3

11 [a] 756.2 = 2 tenths + 6 units + 5 tens
+ 7 hundreds
[b] 300.1 = 1 tenth + 0 units + 0 tens
+ 3 hundreds
[c] 57.3 = 3 tenths + 7 units + 5 tens
+ 0 hundreds
[d] 197 = 0 tenths + 7 units + 9 tens
+ 1 hundred
[e] 40.1 = 1 tenth + 0 units + 4 tens
+ 0 hundreds

12 [a] 0.6 [b] 9 [c] 8 [d] 7
[e] 7 , 0.4 [f] 6.3 [g] 38.6 [h] 3.2

13 [a] 0.6 [b] 0.9 [c] 0.5 [d] 0.8
[e] 0.7 [f] 0.4 [g] 0.3 [h] 0.1

14 [a] 168.④ [b] 814.③ [c] 79.⑤
[d] 100.① [e] 2 060.⑨ [f] 5 432.①

Exercise 5

1 [a] 8.27 [b] 0.07 [c] 0.025
[d] 26.153 [e] 8.07 [f] 63.017
[g] 3.01 [h] 2.07 [i] 5.004

2 [a] $16\frac{72}{100}$ [b] $17\frac{23}{100}$ [c] $125\frac{174}{1000}$
[d] $\frac{65}{100}$ [e] $6\frac{9}{100}$ [f] $5\frac{17}{1000}$
[g] $28\frac{1}{1000}$ [h] $\frac{4}{1000}$ [i] $17\frac{17}{100}$

3 [a] $\frac{453}{100}$ [b] $\frac{24\,512}{1000}$ [c] $\frac{507}{1000}$
[d] $\frac{2\,001}{1000}$ [e] $\frac{10\,001}{1000}$ [f] $\frac{4\,747}{100}$

4 [a] $\frac{3 \times 2}{50 \times 2} = \frac{6}{100} = 0.06$

[b] $13\frac{8 \times 4}{25 \times 4} = 13\frac{32}{100} = 13.32$

[c] $108\frac{1 \times 25}{4 \times 25} = 108\frac{25}{100} = 108.25$

[d] $7\frac{1 \times 5}{20 \times 5} = 7\frac{5}{100} = 7.05$

[e] $26\frac{1 \times 4}{25 \times 4} = 26\frac{4}{100} = 26.04$

[f] $127\frac{16+8}{800+8} = 127\frac{2}{100} = 127.02$

[g] $\frac{187 \times 4}{250 \times 4} = \frac{748}{1\,000} = 0.748$

[h] $\frac{37 \times 2}{500 \times 2} = \frac{74}{1\,000} = 0.074$

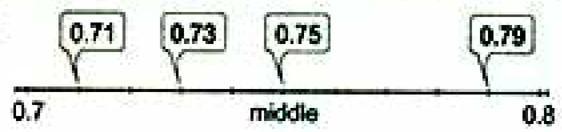
[i] $18\frac{21 \div 7}{70 \div 7} = 18\frac{3}{10} = 18.3$

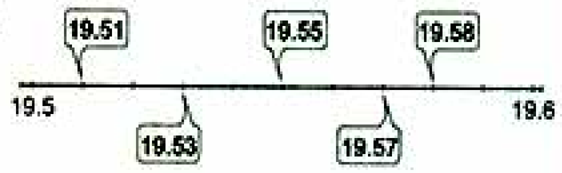
[j] $\frac{14 \div 2}{2\,000 \div 2} = \frac{7}{1\,000} = 0.007$

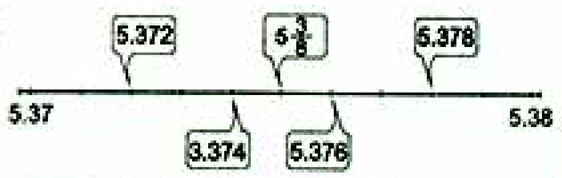
[k] $\frac{1\,002 \div 3}{300 \div 3} = \frac{334}{100} = 3.34$

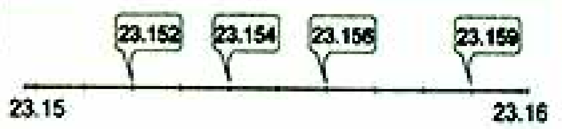
5 [a] 6.02 [b] 0.300 [c] 22.35
[d] 0.09 [e] 100.049 [f] 0.011
[g] 44.004

6 [a] Thirty five hundredths.
[b] Nine and seventy-three hundredths.
[c] Forty-nine and three hundred forty-seven thousandths.
[d] Two and nine hundredths.
[e] Three hundred eighteen thousandths.
[f] Sixty four and seventy-five thousandths.
[g] One hundred , twenty-five and seven thousandths.

7 [a]


[b]


[c]


8 [a]


[b]

[c]

9

	Number	Hundreds	Tens	Units	Tenths	Hundredths	Thousandths
[a]	416.139	4	1	6	1	3	9
[b]	629.041	6	2	9	0	4	1
[c]	70.287	0	7	0	2	8	7
[d]	906.57	9	0	6	5	7	0
[e]	901.43	9	0	1	4	3	
[f]	50.018		5	0	0	1	8
[g]	318	3	1	8	0	0	0

10 [a] 741.3⑤7 [b] 4.5⓪3 [c] 62.3⑤
[d] 0.2④1 [e] 23.0③4 [f] 0.1⓪4
[g] 604.1⑥ [h] 0.0⓪4 [i] 220.1③

11

	Number	The value of the underlined digit
[a]	290.681	200
[b]	604.571	$\frac{5}{10}$
[c]	522.109	$\frac{9}{1\,000}$
[d]	614.837	$\frac{3}{100}$
[e]	310.208	0
[f]	480.093	80

12 [a] 8.746 = 8 + 0.746 = 8 + 0.7 + 0.04 + 0.006 [b] 25.691 = 25 + 0.691 = 25 + 0.6 + 0.09 + 0.001
[c] 103.102 = 103 + 0.102 = 103 + 0.1 + 0.002

13 [a] 5.03 [b] $\frac{17}{1\,000}$ [c] $\frac{5}{1\,000}$
[d] hundredths [e] 550.005 [f] 0.15
[g] 4.5

14 The number is : $2.364 = \frac{2\,364}{1\,000}$

Exercise 6

1 [a] 24 < 24.9 < 25 [b] 20 < 20.40 < 21
[c] 754 < 754.25 < 755
[d] 0 < 0.92 < 1 [e] 6 < 6.542 < 7
[f] 15 < 15.04 < 16
[g] 208 < 208.5 < 209
[h] 400 < 400.003 < 401

2 [a] 0.71 , 0.72 , 0.73 , 0.74 and 0.76
[b] 17.1 , 17.3 , 17.5 , 17.7 and 17.8
[c] 12.11 , 12.13 , 12.16 , 12.17 and 12.19
[d] 400.231 , 400.233 , 400.234 , 400.236 and 400.238
[e] 14.91 , 14.93 , 14.95 , 14.96 and 14.99
[f] 0.091 , 0.093 , 0.094 , 0.096 and 0.099

3 [a] 17.03 , 17.019 and 17.7
[b] 34.2 and 34.07
[c] 34 , 34.07 and 34.2
[d] 17.03 and 17.019
[e] 17.03 and 17.019 [f] 34.07

4 [a] > [b] < [c] < [d] >
[e] < [f] < [g] > [h] =
[i] < [j] > [k] < [l] <
[m] < [n] > [o] > [p] >
[q] < [r] > [s] > [t] =
[u] > [v] > [w] < [x] =
[y] < [z] >

5 [a] 16.3 [b] 6 [c] 3.42 [d] 29.5

6 [a] 3.05 [b] 9.47 [c] 23.9 [d] 0.76

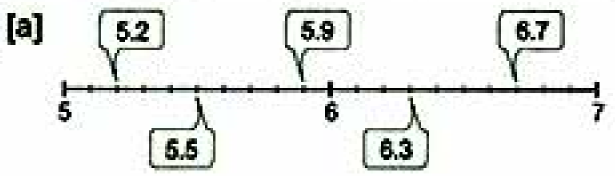
7 [a] The order is : 7.25 , 7.30 and 7.5
[b] The order is : 0.42 , 0.45 and 0.70
[c] The order is : 5.08 , 5.8 , 8.5 and 58
[d] The order is : 75.102 , 75.12 , 75.2 and 75.24
[e] The order is : 152.13 , 152.3 , 157 and 157.1
[f] The order is : 0.003 , 0.033 , 0.3 and 0.32
[g] The order is : 7.395 , 82 , 83.624 , 98.76 , 210.8 and 300.1
[h] The order is : 6.2 , $6\frac{1}{4}$, 6.3 and 6.35
[i] The order is : 0.06 , 0.4 , $\frac{11}{25}$ and $\frac{3}{5}$
[j] The order is : 3 tenths , 3.08 , $3\frac{1}{4}$ and $3\frac{1}{2}$

8 [a] The order is : 5.85 , 5.7 , 5.58 and 5.5
[b] The order is : 0.85 , 0.84 , 0.804 and 0.084

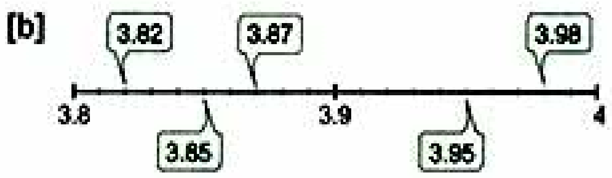
[c] The order is : 500.36 , 5.63 , $5\frac{36}{100}$ and 5.063
[d] The order is : $\frac{1}{2}$, $\frac{1}{4}$, 0.05 and 0.025
[e] The order is : 6.152 , 6.15 , $6\frac{1}{8}$ and 6.0125
[f] The order is : 1.5 , 13 tenths , $1\frac{1}{5}$ and $1\frac{1}{10}$

9 [a] 3.2 , 3.12 , 10.04 and 3.215
[b] 1.3 and 1.12 [c] 1.12
[d] 10.04 [e] 1.3 and 1.12
[f] 3.2 , 3.12 and 3.215
[g] 3.2 and 3.215
[h] 1.12 , 1.3 , 3.12 , 3.2 , 3.215 and 10.04

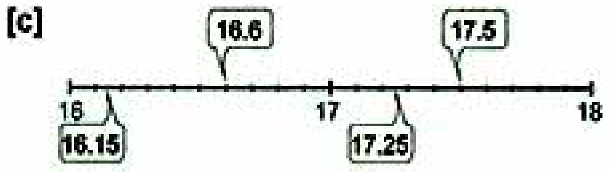
10 [a] 18.04 and 18.040
[b] 0.10 and 0.1
[c] 5.73 and 5.730 also 5.073 and 5.073
[d] 9.7 and 9.700

11 [a]


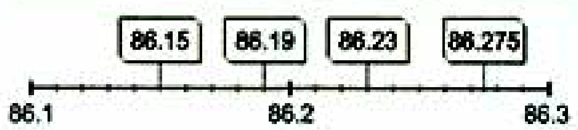
The order is : 5.2 < 5.5 < 5.9 < 6.3 < 6.7

[b]


The order is : 3.82 < 3.85 < 3.87 < 3.95 < 3.98

[c]


The order is : 16.15 < 16.6 < 17.25 < 17.5

12


The order is : 86.275 > 86.23 > 86.19 > 86.15

Test on the first part of unit one (from lesson 1 to lesson 6)

1 (1) 5.7 (2) tenths (3) $4\frac{1}{2}$
(4) 0.051 (5) 1 (6) 0.4
(7) 21 (8) < (9) 0.3
(10) 0.42

2 (11) 0.06 (12) 7.6 (13) $\frac{31}{40}$ (14) $\frac{25}{28}$
(15) two and nine tenths (16) $\frac{2}{3}$

3 (17) The order is : 58 , 8.5 , 5.8 and 5.08
(18) The numbers are : 17.2 , 17.3 , 17.5 and 17.9 "There are other solutions"
(19) The order is : $\frac{1}{6}$, $\frac{3}{8}$, $\frac{5}{12}$ and $\frac{2}{3}$
(20) He paid = $3\frac{1}{2} + 1\frac{1}{4}$ = L.E $4\frac{3}{4}$

Exercise 7

1 [a] 0.985 [b] 2.72 [c] 0.435
[d] 3000.122 [e] 33.8 [f] 100
[g] 32.19 [h] 25.13 [i] 14.002
[j] 116.702 [k] 1 058.83 [l] 47.044
[m] 1.187 [n] 303.437 [o] 43.755
[p] 0.125 [q] 455.375 [r] 50
[s] 10.211 [t] 28.261 [u] 62.235
[v] 18.34 [w] 80.681 [x] 22.033
[y] 946.362 [z] 140.134

2 [a] 48.88 [b] 21.9 [c] 1.333
[d] 1.305 [e] 11.95 [f] 85.41
[g] 2.333 [h] 2.058 [i] 138.01
[j] 458.03 [k] 12.28 [l] 27.03
[m] 15.705 [n] 10.885 [o] 274.806
[p] 106.597 [q] 10.007 [r] 15.65
[s] 23.755 [t] 52.15 [u] 4.937
[v] 241 [w] 23.429 [x] 0.255
[y] 1.863 [z] 19.25

3 [a] 8.7 [b] 42 [c] 48.9
[d] 7.54 [e] 7.521 [f] 62.8
[g] 700.1 [h] 99.675 [i] 5 830.01
[j] 610 482.6 [k] 4.25 [l] 7.8
[m] 425 [n] 7 776

4 [a] 99.58 [b] 48 [c] 148.294
[d] 14.562 [e] 269.015 [f] 10.01
[g] 1 000 [h] 25.777 [i] 10.52
[j] 533.315 [k] 6 [l] 83.37
[m] 117.609 [n] 187.139 [o] 2 580.16
[p] 1.175 [q] 0.621

5 [a] 8 [b] 2.6 [c] 15.56
[d] 22.79 [e] 75.375 [f] 52.15
[g] 2.984 [h] 11.234 [i] 21.292
[j] 45.21 [k] 105.171 [l] 100
[m] 67 200 [n] 0.06 [o] 100
[p] 1 000

6 [a] 8.44 [b] 7.77 [c] 0.44
[d] 3.61 [e] 98.7 [f] 0.919
[g] 100.194 [h] 3.303 [i] 2.286
[j] 60 [k] 0.14 [l] 5.4
[m] 2.356 [n] 4.25 [o] 0.004
[p] = [q] 9.6

7 [a] < [b] < [c] < [d] > [e] <
[f] < [g] < [h] = [i] < [j] <
[k] > [l] = [m] = [n] < [o] <
[p] > [q] = [r] < [s] < [t] <

8 [a] × [b] ✓ [c] × [d] × [e] ×
[f] ✓ [g] × [h] × [i] ✓ [j] ✓
[k] × [l] × [m] ✓ [n] × [o] ×
[p] ✓ [q] ✓ [r] × [s] ×

9 [a] 3.37 + 6.52 = 9.89 [b] 1.96 + 3.37 = 5.33
[c] 3.20 + 5.53 = 8.73 [d] 97.48 + 43.45 = 140.93
[e] 34.42 + 60.23 = 94.65 [f] 25.486 − 13.356 = 12.130
[g] 5.69 − 4.24 = 1.45 [h] 9.513 − 5.271 = 4.242

[i] 83.57 − 58.734 = 24.836 [j] 113.579 − 13.408 = 100.171
[k] 5.780 − 1.413 = 4.367 [l] 299.888 − 56.457 = 243.431

Word Problems

[a] What Hany paid = 75.75 + 49.5 = L.E. 125.25
[b] They have together = 3.95 + 6.3 = L.E. 10.25
[c] His profit = 366.95 − 306.7 = L.E. 60.25
[d] The remainder with him = 53.75 − 35.05 = L.E. 18.7
[e] What she paid = 125.7 + 37.95 = L.E. 163.65
The money left with her = 253 − 163.65 = L.E. 89.35
[f] What Mazen paid = 9.75 + 8.4 = L.E. 18.15
The left money with him = 35 − 18.15 = L.E. 16.85
[g] They have together = 24.75 + 15.25 = L.E. 40
[h] The difference between what they have = 9.8 − 4.25 = 5.55 pounds.
[i] The goods cost = 99.8 + 45.75 + 70.25 = L.E. 215.8
No , she can not buy all what she wants because the cost is more than what she has.
[j] a. No, he need another piece of cloth.
b. What the two shirts need = $1\frac{3}{4} + 1\frac{1}{2}$ = 1.75 + 1.5 = 3.25 metres.
What the man needs = 3.25 − 3 = 0.25 metre.

Exercise 8

1 [a] 490 [b] 5 020 [c] 320
[d] 0 [e] 100

2 [b] 86 030 [c] 90 [d] 30
[e] 10 [f] 110 [g] 20
[h] 220 [i] 2 010 [j] 1 000

[k] 10 [l] 0 [m] 10 000
[n] 0 [o] 9 000 [p] 21 400
[q] 540 [r] 0

3 [a] 94 467 ≃ 94 470 [b] 34 771 ≃ 34 770
[c] 73 105 ≃ 73 110 [d] 432.67 ≃ 430
[e] 6 091 ≃ 6 090 [f] 30 866 ≃ 30 870
[g] 634 907 ≃ 634 910 [h] 474.43 ≃ 470
[i] 73.41 ≃ 70 [j] 59.8 ≃ 60
[k] $4\frac{3}{5}$ ≃ 0

4 [a] 70 [b] 620 [c] 950
[d] 12 580 [e] 10 [f] 0
[g] 1 000 [h] 199.1

5 [a] 295 [b] 12 514 [c] 754
[d] 8 004 [e] 9 415

6 457 **7** 745 and 754

Exercise 9

1 [a] 400 [b] 9 000 [c] 100 [d] 1 000

2 [b] 7 200 [c] 100 [d] 90 000
[e] 600 [f] 0 [g] 1 000
[h] 100 [i] 2 000 [j] 100
[k] 0 [l] 0 [m] 372 100
[n] 100 000 [o] 0 [p] 603 500
[q] 973 000 [r] 990 900

3 [b] 58 000 [c] 963 000 [d] 1 000
[e] 0 [f] 0 [g] 1 000
[h] 6 000 [i] 10 000 [j] 2 000
[k] 520 000 [l] 0 [m] 75 000
[n] 1 000 000 [o] 100 000 [p] 3 000

4 [a] 1 000 [b] 1 000 [c] 60 000
[d] 1 000 [e] 100 [f] 600
[g] 2 625

5 [a] 579 ≃ 600 [b] 8 731 ≃ 9 000
[c] 12 488 ≃ 12 000 [d] 112 513.2 ≃ 112 500
[e] 1 881 ≃ 1 900 [f] 59 951.4 ≃ 60 000
[g] 157.26 ≃ 200 [h] 9.99 ≃ 0

6

	Number	Approximated to the nearest 10	Approximated to the nearest 100	Approximated to the nearest 1 000
[a]	6 927	6 930	6 900	7 000
[b]	517 109	517 110	517 100	517 000
[c]	4 381.5	4 380	4 400	4 000
[d]	649.75	650	600	1 000
[e]	38	40	0	0
[f]	6 543 217	6 543 220	6 543 200	6 543 000
[g]	3	0	0	0

7 [a] 650 [b] 10 499 [c] 9 949 [d] 29 500

8 [a] 5 261 [b] 847
[c] 19 (There are other solutions)
[d] 6 274 ≃ 6 300

Word Problems

[a] The number of pupils = 15 × 31
= 465 ≃ 500 pupils.

[b] She paid = 25.3 + 35.7 + 85
= 146 ≃ L.E. 150

[c] The number of litres = 7 × 30
= 210 ≃ 200 litres.

[d] The number of pieces = 36 × 15
= 540 ≃ 500 pieces.

Exercise 10

1 [a] 30 000 [b] 300 000 [c] 70 000
[d] 1 600 000 [e] 0

2 [a] 150 000 [b] 550 000
[c] 10 000 [d] 40 000
[e] 10 000 [f] 70 000
[g] 10 000 [h] 0
[i] 0 [j] 50 000
[k] 10 000 [l] 240 000
[m] 0 [n] 990 000

3 [a] 900 000 [b] 500 000
[c] 700 000 [d] 1 200 000
[e] 100 000 [f] 100 000
[g] 5 000 000 [h] 0
[i] 0 [j] 62 000 000
[k] 87 700 000 [l] 0
[m] 1 000 000 [n] 300 000

4 [a] 20 000 [b] 200 000 [c] 10 000
[d] 10 000 [e] 0

5 [a] 20 557 ≃ 20 000
[b] 81 541 ≃ 80 000
[c] 988 801 ≃ 1 000 000
[d] 72 788.57 ≃ 100 000
[e] 64 162.894 ≃ 100 000
[f] 15 858.796 ≃ 20 000

6 [a] 35 000 [b] 24 999
[c] 5 000 [d] 98 547 632
[e] 21 056 347

Exercise 11

1 [a] 28 [b] 17 [c] 57
[d] 141 [e] 52 [f] 1

2 [a] 3 [b] 3 [c] 54 [d] 7 105
[e] 28 148 [f] 0 [g] 1 [h] 10
[i] 10 [j] 624 [k] 601 [l] 1
[m] 1 [n] 0 [o] 968 [p] 1
[q] 5 [r] 4 [s] 7 [t] 3
[u] 1

3 [a] 15 [b] 160 [c] 25 [d] 1
[e] 1 000 [f] 253.9 [g] 7 [h] >
[i] 98 [j] 32 [k] 6 [l] 2
[m] 4 [n] 71 [o] 3 [p] 5

4 [a] 6.1 ≃ 6 [b] 8.9 ≃ 9
[c] 95.48 ≃ 95 [d] 139.3 ≃ 139
[e] 62.241 ≃ 62 [f] 81.32 ≃ 81
[g] 3.45 ≃ 3 [h] 9.681 ≃ 10
[i] 1.75 ≃ 2 [j] 55.846 ≃ 56

5 [a] 532 [b] 64 [c] 276
[d] 97 [e] 73 [f] 452

6 [a] 57 [b] 3 [c] 760
[d] 256 [e] 538 [f] 5 694

7 [a] 5 [b] 3 [c] 8

Word Problems

[a] He saves = 700.35 – 425 = L.E. 275.35
≃ L.E. 275

[b] Waleed paid = 89.6 + 30.75 = L.E. 120.35
The left money = 200 – 120.35 = L.E. 79.65
≃ L.E. 80

[c] The perimeter = 67.8 + 15.9 + 73.2
= 156.9 cm. = 1.569 m. ≃ 2 m.

Exercise 12

1 [a] 0.6 [b] 51.3 [c] 9.2 [d] 56.7

2 [a]

134.29 ≃ 134.3

[b]

70.07 ≃ 70.1

3 [a] 7.3 [b] 13.8 [c] 296
[d] 83.9 [e] 90.1 [f] 0.2
[g] 170.6 [h] 3.9 [i] 44
[j] 38 000.8 [k] 121 [l] 257.1
[m] 0.1 [n] 0.1 [o] 1
[p] 502.4 [q] 449.8 [r] 6 399.1

4 [a] 65.4 [b] 53.8 [c] 17.9 [d] 349
[e] 400 [f] 1 000 [g] 10 [h] 40

5 [a] 23.516 ≃ 23.5 [b] 0.609 ≃ 0.6
[c] 221 ≃ 220 [d] 89.3 ≃ 89
[e] 939.5 ≃ 940 [f] 381.323 ≃ 381.3
[g] 138.627 ≃ 139 [h] 32.732 ≃ 32.7
[i] 213.51 ≃ 213.5

6

	Number	The number approximated to the nearest 10 000	1 000	100	10	unit	tenth
[a]	124 547.259	120 000	125 000	124 500	124 550	124 547	124 547.3
[b]	205 138.613	210 000	205 000	205 100	205 140	205 139	205 138.6
[c]	78 314.501	80 000	78 000	78 300	78 310	78 315	78 314.5
[d]	7 007.499	10 000	7 000	7 000	7 010	7 007	7 007.5
[e]	320.549	0	0	300	320	321	320.5
[f]	288 003.507	290 000	288 000	288 000	288 000	288 004	288 003.5
[g]	3.172	0	0	0	0	3	3.2
[h]	0.008	0	0	0	0	0	0

7 [a] 23.85 *or* 23.58 [b] 83.25
[c] 8 235 "There are other solutions"
[d] 8 532 *or* 8 523 [e] 28.35

Test on the second part of unit one (from lesson 7 to lesson 8 E)

1 (1) 43 (2) 85.33 (3) 62.72
(4) 5.766 (5) 0.255 (6) 1000
(7) = (8) 100 (9) 160.8
(10) >

2 (11) 900 000 (12) 34.5 , 30 (13) 8
(14) 87.17 (15) 16.75 , 16.8 (16) 3.8 , 4

3 (17) The difference = 32.85 – 20.10
= 12.75 pounds.

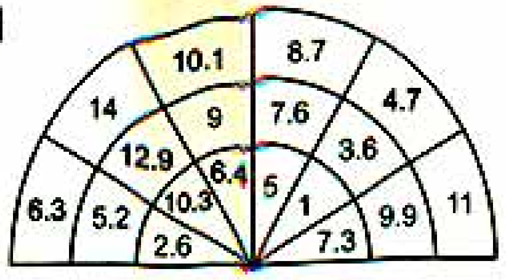
(18) [a] The smallest is 5.13
[b] The greatest is 10.3
[c] Their sum = 5.13 + 10.3 = 15.43
[d] The difference between them
= 10.3 – 5.13 = 5.17

(19) 3

(20) The price of each lamp = 125 ÷ 10
= 12.5 pounds.

Activities of unit one

1



2 [a] The two numbers are 55.75 and 44.25
[b] 49
[c] The two numbers are 3.2 and 5
[d] 69.23

3 [a] 93.47 + 6.529 = 99.999
[b] 48.3 + 7.25 = 55.55
[c] 95.087 – 17.31 = 77.777
[d] 45.6 – 34.489 = 11.111

4 [a] 6 499 [b] 350
[c] 3 747 [d] 2 850 399

5 [a] 1 400 and 500 "There are other solutions"
[b] 14 900 and 5 000 "There are other solutions"
[c] The greatest possible difference between two whole numbers such that they have the same result if approximated to the nearest :
- Ten : 9
- Hundred : 99
- Thousand : 999
- Ten thousand : 9 999
- Hundred thousand : 99 999

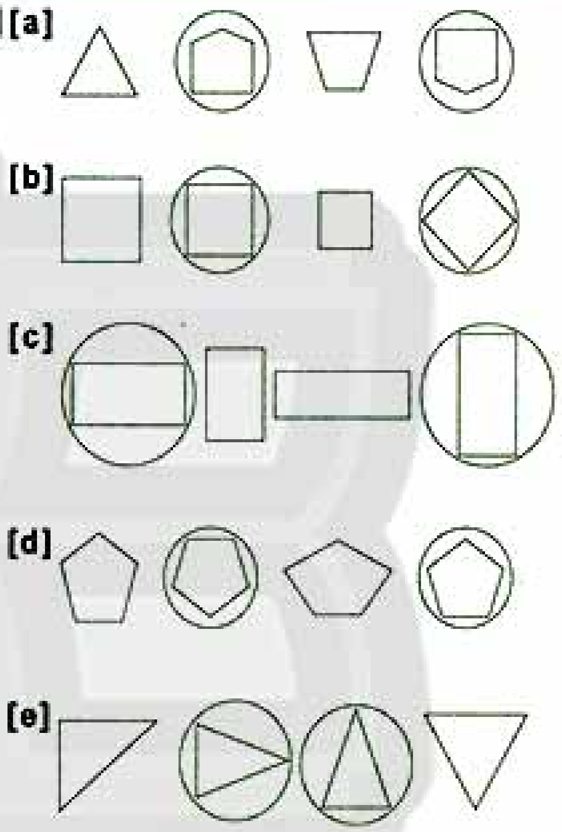
6 [a] 22 431 + 40 358 ≃ 63 000
[b] 17 201 + 29 354 ≃ 46 600
[c] 780.61 + 264.21 ≃ 1 044.8
[d] 4 036.5 + 2 360.1 ≃ 6 400
"There are other solutions in each case"

Unit Two

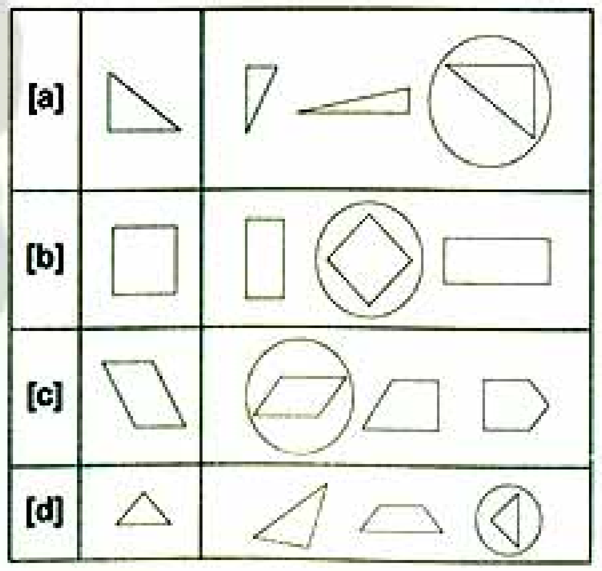
Exercise 13

1 [b] No [c] Yes [d] No
[e] Yes [f] No [g] No
[h] Yes

2 [a] [b] [c] [d] [e]

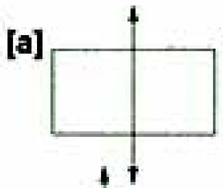


3



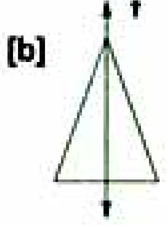
4 [a] D [b] G [c] H [d] B
[e] L [f] I [g] E

5 [a]



"There are other solutions"

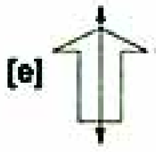
[b]



[c] Impossible.

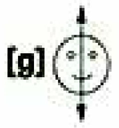
[d] Impossible.

[e]

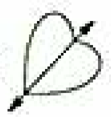


[f]

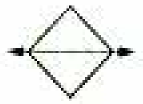
[g]



[h]

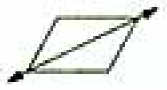


[i]



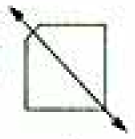
"There are other solutions"

[j]

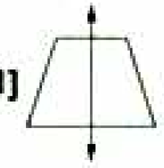


"There are other solutions"

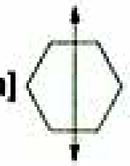
[k]



[l]



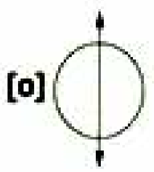
[m]



"There are other solutions"

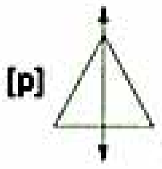
[n] Impossible.

[o]



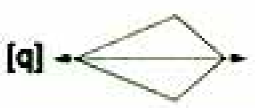
"There are other solutions"

[p]



"There are other solutions"

[q]



6 Draw by yourself.

7 [a] ZT [b] ZY [c] YX
[d] XT [e] m (∠ T) [f] m (∠ Z)
[g] m (∠ Y) [h] m (∠ X)

8 [a] ∠ B [b] ∠ N [c] ∠ L [d] $\overline{CB}$
[e] $\overline{BA}$ [f] $\overline{CA}$ [g] 100° [h] 5

9 [a] 50° [b] 70° [c] 60°

10 [a] 90° [b] 60° [c] 30° [d] 60°

11 [a] 4 [b] 3 [c] 13

12 [a] $\overline{UV}$ [b] ∠ Y [c] $\overline{ZX}$
[d] ∠ W [e] 38° [f] 4

13 [a] equal , equal [b] equal [c] equal
[d] side [e] congruent [f] S
[g] $\overline{EF}$ [h] 16 [i] 20

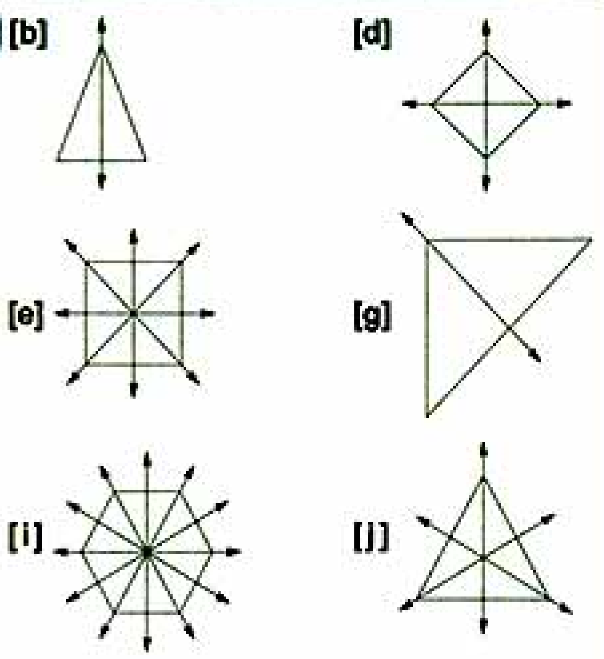
14 [a] × [b] × [c] ✓ [d] ✓ [e] ×
[f] × [g] ✓ [h] × [i] × [j] ×

Exercise 14

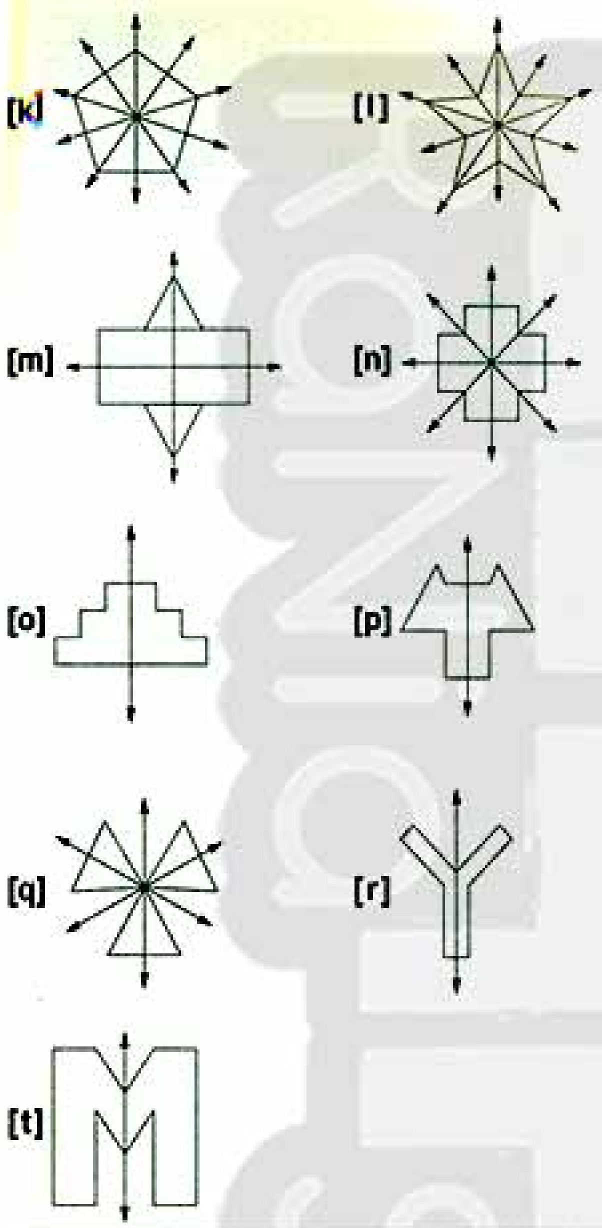
1 [a] No [b] No [c] Yes [d] No
[e] No [f] Yes [g] Yes [h] Yes
[i] Yes [j] No [k] Yes

2 [a] No [b] Yes [c] Yes [d] Yes
[e] Yes [f] Yes [g] Yes [h] Yes
[i] No [j] Yes [k] Yes [l] Yes
[m] No [n] No

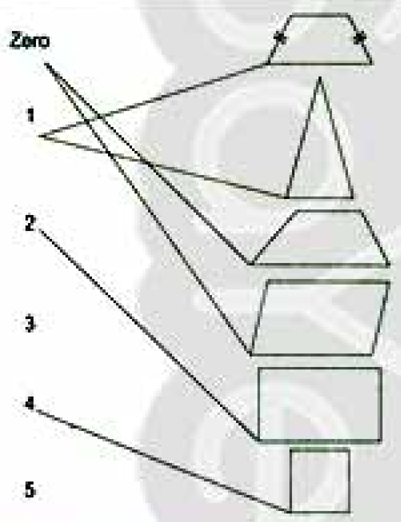
3 [b] [d] [e] [g] [i] [j]



[k] [l] [m] [n] [o] [p] [q] [r] [t]



4



5 [a] one [b] three [c] one [d] four
[e] two [f] two [g] five [h] six
[i] congruent , line of symmetry

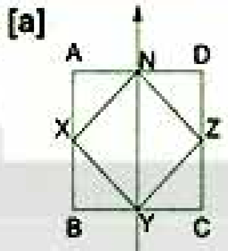
6 [a] 0 [b] 0 [c] square [d] 5
[e] 2 [f] 1 [g] 0 [h] K and B

7 [a] ✓ [b] × ; Correction : four ⟶ no
[c] × ; Correction : four ⟶ two
[d] × ; Correction : three ⟶ no
[e] ✓ [f] ✓
[g] × ; Correction : four ⟶ two

8 [a] ON [b] MP [c] NMP

9 [a] XQ [b] YZ [c] PT
[d] XQP [e] YZT [f] PTX

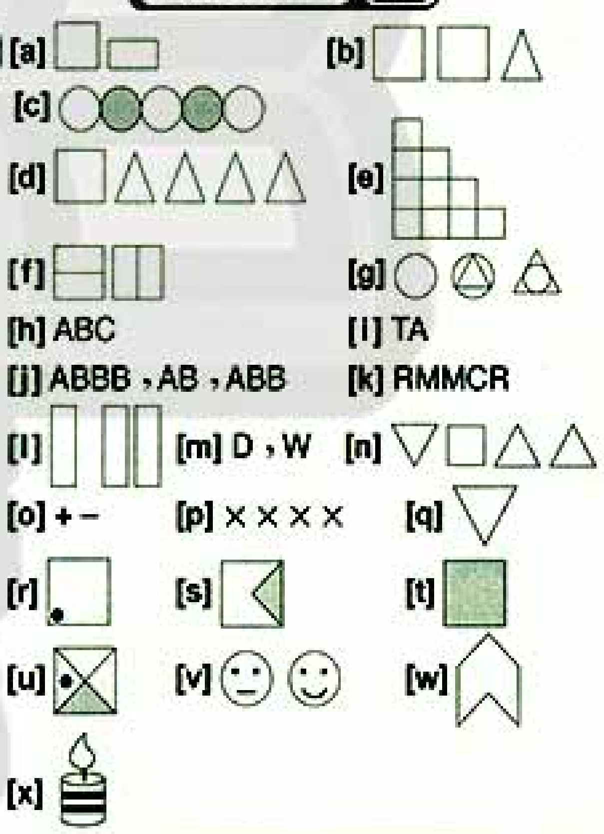
10 [a] [b] 4



"There are other solutions"

Exercise 15

1 [a] [b] [c] [d] [e] [f] [g]
[h] ABC [i] TA
[j] ABBB , AB , ABB [k] RMMCR
[l] [m] D , W [n]
[o] + − [p] × × × × [q]
[r] [s] [t]
[u] [v] [w]
[x]



2 [a] 34 , 41 [b] 21 , 25
[c] 32 , 64 [d] 81 , 243
[e] 8 , 13 [f] 3 , 0
[g] $\frac{8}{81}$, $\frac{16}{243}$

3 [a] 17.4 , 17.5 , 17.6
[b] 13.8 , 14 , 14.2 , 14.4
[c] 17.6 , 18 , 18.4 [d] 8.8 , 8.4 , 8

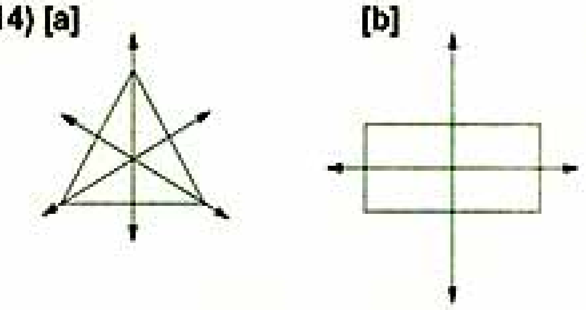
[e] 4.5 , 5.6 , 6.7 [f] 5.5 , 6.6 , 7.7
[g] 45.6 , 56.7 , 67.8

Test on unit two

1 (1) 2 (2) $\overline{XY}$ (3) C
(4) × (5) △ (6) 1
(7) 28 (8) >

2 (9) sides , equal (10) $\frac{8}{81}$, $\frac{16}{243}$
(11) 1 (12) XZ

3 (13) [a] $\overline{XY}$ [b] 60°
[c] $\overline{CB}$ [d] 9
(14) [a] [b]



Activities of unit two

1

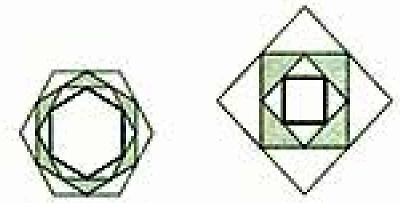
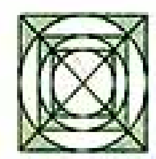


Figure (1) Figure (2)

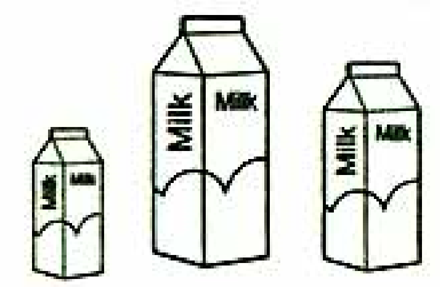
2



Unit Three

Exercise 16

1 [a]



(1) (3) (2)

[b]

(2) (3) (1)

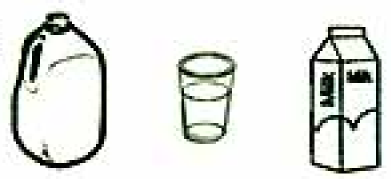
[c]

(3) (1) (2)

[d]

(3) (2) (1)

[e]



(3) (1) (2)

2 [a] 250 mL [b] 8 L [c] 150 mL [d] 1 L
[e] 5 L [f] 1 mL [g] 450 mL [h] 10 L

3 [b] millilitre [c] millilitre
[d] litre [e] litre
[f] litre [g] millilitre
[h] litre [i] litre
[j] millilitre [k] litre
[l] litre [m] litre

4 [a] 150 millilitres [b] 15 millilitres
[c] 15 litres [d] 1 500 millilitres
[e] 1 500 millilitres [f] 2 000 millilitres
[g] 250 millilitres [h] $\frac{1}{5}$ litre
[i] 50 litres [j] 10 litres

5 [b] 6 000 [c] 4 [d] 20 000
[e] 7 [f] 7 500 [g] 1.4
[h] 1.205 [i] 0.02 [j] 1 250
[k] 24 000 [l] 5 500 [m] 10
[n] 3.5 [o] 8.5 [p] 9.75
[q] 2 000 [r] 7 000

6 [a] litre [b] 1 dm³ [c] 1
[d] 0.9 [e] 82 [f] $6\frac{3}{4}$
[g] 0.01 [h] $\frac{3}{4}$

7 [a] × [b] ✓ [c] ✓ [d] × [e] ✓

8 [a] 3300 [b] 23 [c] 3
[d] 15 750 [e] 5 800 [f] 3

9 [a] > [b] > [c] = [d] <
[e] < [f] = [g] = [h] <
[i] > [j] > [k] < [l] <

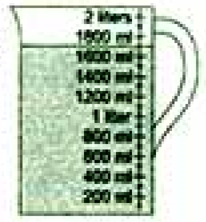
10 [a] 1 litre [b] 5 000 millilitres
[c] 8 304 millilitres [d] $14\frac{1}{2}$ litres

11 [a] The order is : 2 litres , 3 000 millilitres and $3\frac{1}{2}$ litres
[b] The order is : 3 mL , 30 mL , 2 000 mL , 10 L and 30 L
[c] The order is : 2 099 mL , $2\frac{1}{4}$ L , $2\frac{3}{4}$ L and 3 L

12 [a] The order is : 1 250 mL , 1 L , $\frac{1}{2}$ L and 250 mL
[b] The order is : 9 000 millilitres , 8.75 litres , 6 500 millilitres and 5 litres
[c] The order is : $12\frac{1}{2}$ L , 10 L , 9 900 millilitres and 7 000 cm³

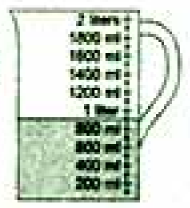
13 [a] 1 000 [b] 800 [c] 1.6
[d] 1.5 [e] 1.1 [f] 0.5

14 [a]

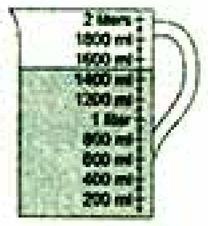


[b]

[c]



[d]



[e]

[f]

15 The number of drops of water = 5 × 1 000
= 5 000 drops.

16 The number of cups = 1 000 ÷ 250 = 4 cups.

17 The number of litres = 2 Litres = 2 000 mL

18 The number of millilitres = 5 × 300 = 1 500 mL

19 [a] Less. [b] Less.

20 (1) C (2) F (3) E (4) D (5) A (6) B

Exercise 17

1 [a] 2 tons [b] 150 kg. [c] 100 kg.
[d] 5 kg. [e] 15 kg. [f] 400 gm.
[g] 20 gm. [h] 100 gm. [i] 5 kg.

2 [a] kilograms [b] kilograms [c] tons
[d] grams [e] tons [f] grams
[g] grams [h] kilograms [i] grams
[j] grams [k] kilograms [l] grams
[m] grams [n] grams [o] kilograms

3 [a] 500 grams [b] 150 grams
[c] 700 grams [d] 6 kilograms
[e] 5 kilograms [f] 2 tons [g] 95 kg.
[h] 10 grams [i] 3 kg. [j] 50 gm.
[k] 180 gm. [l] 3 kg. [m] 15 kg.

4 [b] 7.24 [c] 75 000 [d] 12
[e] 7 000 000 [f] 0.5 [g] 70 000
[h] 4.5 [i] 0.001 [j] 0.001
[k] 0.06 [l] 0.005 [m] 0.001
[n] 10 000 [o] 1.9 [p] 4.75
[q] 500 [r] 4 500

5 [b] 3 , 715 [c] 73 , 102 [d] 9 , 251
[e] 53 008 [f] 6 032

6 [a] 6 450 [b] 7 750 [c] 7
[d] 1 800 [e] 10 000 , 10

7 [a] 4 700 [b] 6 500 [c] 2 750
[d] 20 [e] $1\frac{3}{4}$

8 [a] < [b] > [c] < [d] =
[e] = [f] > [g] > [h] =
[i] < [j] = [k] = [l] =

9 [b] $2\frac{1}{2}$ kg. – (2 tons) – 2 000 gm.
[c] ($\frac{1}{2}$ ton) – 3 kg. – 300 001 gm.
[d] (600 tons) – 800 000 gm. – 7 000 kg.
[e] 2 490 gm. – 249 kg. – ($\frac{1}{4}$ ton)
[f] ($\frac{3}{4}$ ton) – 99 010 gm. – 99 kg.

10 [a] The order is : gram , kilogram and ton.
[b] The order is : $\frac{1}{2}$ kg. , 850 gm. , 2 kg. and 3 kg.
[c] The order is : 5 000 gm. , 7 kg. , 120 kg. and $\frac{1}{2}$ ton.
[d] The order is : 200 gm. , $\frac{1}{2}$ kg. , 700 gm. and $1\frac{1}{2}$ kg.
[e] The order is : 700 gm. , 12 500 gm. , 17 kg. and $1\frac{1}{2}$ ton.

11 [a] 6 [b] $6\frac{1}{2}$ [c] $4\frac{1}{2}$

12 [a] 1.8 [b] 3.4 [c] 600 [d] 2 700

13 [b] **14** [b] **15** [a]

Word Problems

[a] The price of oranges = 3 × 200 = P.T. 600
The price of grapes = 2 × 300 = P.T. 600
She paid = 600 + 600 = P.T. 1 200

[b] She carried = 2.5 + 2.25 = 4.75 kg.

[c] The family consume = 1.5 + 1.5 + 1.5 + 1.5 = 6 kg.
The total price = 6 × 35 = L.E. 210

[d] The family consume = 2 × 4 = 8 kg.
The total price = 8 × 15 = L.E. 120

[e] The total weight = 425 × 3 = 1 275 gm.
This weight is more than one kg.

[f] (1) The price of one ton of iron = $4\frac{1}{2}$ × 1 000 = L.E. 4 500
(2) He paid = 8 × 4 500 = L.E. 36 000

[g] (1) The price of bananas = 5 × 4 = L.E. 20
The price of apples = 2 × 8 = L.E. 16
The price of oranges = 6 × 3 = L.E. 18
The family paid = 20 + 16 + 18 = L.E. 54
(2) To pay the least money, the family should eat the same amount from guavas.

Exercise 18

1 [a] hours [b] days
[c] minutes [d] hours

2 [a] Some units of measuring time are days, hours, minutes and seconds.

[b] (1) 1 day = 24 hours and 1 hour = $\frac{1}{24}$ day
(2) 1 hour = 60 minutes and 1 minute = $\frac{1}{60}$ hour
(3) 1 minute = 60 seconds and 1 second = $\frac{1}{60}$ minute

[c] (1) 1 day = 24 hours = 24 × 60 minutes = 1 440 minutes
(2) 1 hour = 60 minutes = 60 × 60 seconds = 3 600 seconds
(3) 1 day = 1 440 minutes = 1 440 × 60 seconds = 86 400 seconds

3 [a] 60 [b] 120 [c] 180 [d] 2
[e] 15 [f] $\frac{1}{60}$ [g] 20 [h] 30
[i] 100 [j] 150 [k] 140 [l] $4\frac{1}{2}$
[m] $2\frac{1}{4}$ [n] 4 [o] 125 [p] $5\frac{1}{2}$
[q] 210 [r] 285

4 [a] 60 [b] 120 [c] 90 [d] 3
[e] 4 [f] 5 [g] 3 600 [h] 135

5 [a] 24 [b] 48 [c] 12 [d] 6
[e] 8 [f] 16 [g] 36 [h] 60
[i] 54 [j] 2 [k] $1\frac{1}{2}$ [l] 3
[m] $\frac{2}{3}$ [n] $1\frac{1}{4}$ [o] 1 440 [p] 360
[q] 64 [r] 80 [s] 168 [t] 84

6 [a] 7 [b] $4\frac{1}{2}$
[c] 7 560 [d] 75 hours
[e] $96\frac{1}{2}$ hours [f] 7 200 seconds

7 [a] = [b] < [c] > [d] <
[e] < [f] = [g] < [h] <
[i] = [j] < [k] = [l] >
[m] = [n] > [o] = [p] =
[q] < [r] < [s] =

8 [a] 14 000 seconds, 250 minutes and (7 hours)
[b] (30 000 minutes), 498 hours and 20 days
[c] 8 600 seconds, 140 minutes and ($2\frac{1}{2}$ hours)
[d] 4 700 minutes, (80 hours) and $3\frac{1}{4}$ days
[e] 19 100 seconds, (330 minutes) and $5\frac{1}{3}$ hours
[f] 14 000 minutes, 210 hours and (10 days)

9 [a] The order is : 2 160 minutes, 42 hours and 2 days.
[b] The order is : 3 600 seconds, 2 hours, 240 minutes and $\frac{1}{4}$ day.
[c] The order is : 3 600 seconds, $\frac{1}{8}$ a day, $\frac{1}{3}$ a day and 1 440 minutes.
[d] The order is : 4 hours, 300 minutes and 19 000 seconds.
[e] The order is : 6 000 seconds, $\frac{1}{3}$ a day, 20 hours and 4 800 minutes.

10 [a] The order is : $\frac{2}{3}$ a day, 15 hours, 240 minutes and 3 600 seconds
[b] The order is : 10 days, 1 week, 72 hours and 3 600 minutes.
[c] The order is : 18 hours, 1 020 minutes and $\frac{2}{3}$ day.

11 [a] 30 seconds [b] 30 minutes
[c] $1\frac{1}{2}$ hour [d] 30 minutes
[e] 7 hours [f] 3 hours
[g] 500 minutes [h] $\frac{1}{2}$ a day

12 [a] 2 hours and 5 minutes [b] 168
[c] 3 hours and 10 minutes
[d] 12 days and 3 hours [e] 130

13 [a] She took = 7 × 9 = 63 minutes.
[b] It took = 23 × 17 = 391 minutes.
[c] The number of school days = 6 × 3 = 18 days.
[d] The first half end at 3 : 15 pm.
[e] 30 minutes
[f] He finished his homework at 9 : 15 pm.
[g] His age =

	Year	Month	Day
	2 009	9 10	31 1
−	1 999	5	17
	10	4	14

[h] (1) His salary = 10 × 8 × 5 = L.E. 400
(2) His salary = 10 × 8 × 5 × 7 = L.E. 2 800

Test on unit three

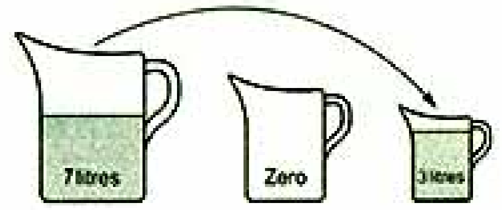
1 (1) 5 000 (2) < (3) 3 500
(4) = (5) 300 gm. (6) 36
(7) kilogram (8) 2

2 (9) 4 500 (10) capacity (11) 7.2
(12) 140 (13) 6.25 (14) 168

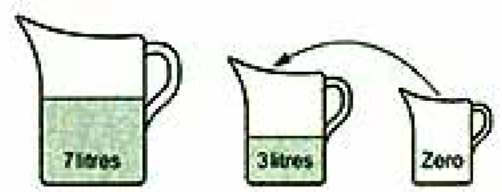
3 (15) The order is : 20 L, 3 000 cm³, $2\frac{3}{4}$ dm³ and 2 000 mL
(16) 8 : 15 PM

Activities of unit three

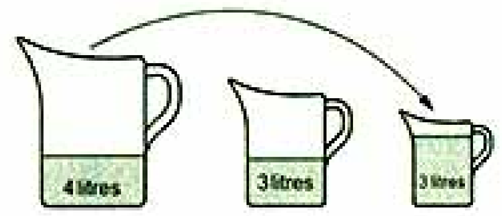
1 First step :



Second step :

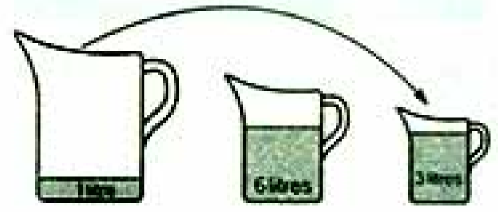


Third step :



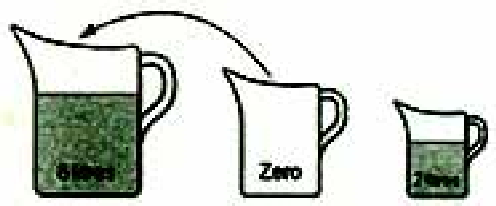
Fourth step :

Fifth step :



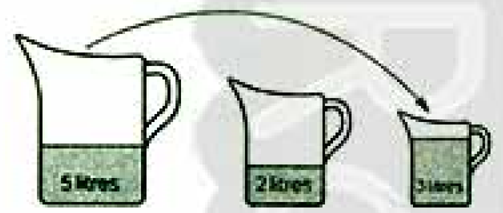
Sixth step :

Seventh step :



Eighth step :

Ninth step :



Tenth step :

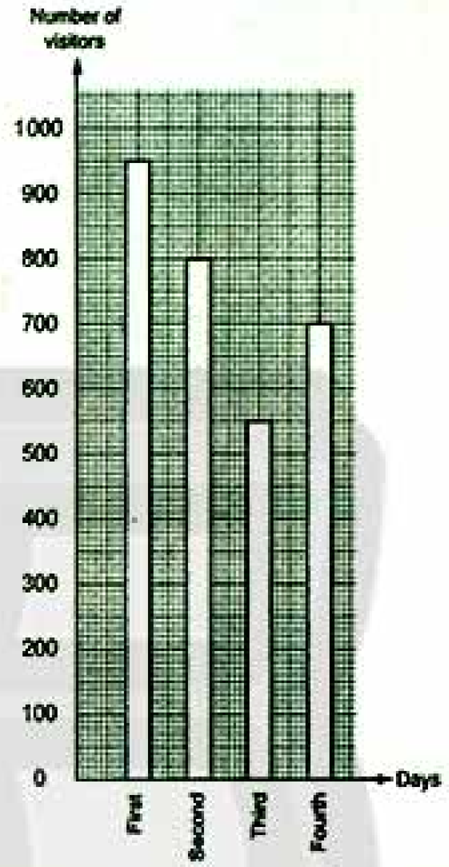
2 [a] The weight of the small cube is three times of the weight of the ball.

[b] The weight of the large cube is seven times of the weight of the ball.

Unit Four

Exercise 19

1



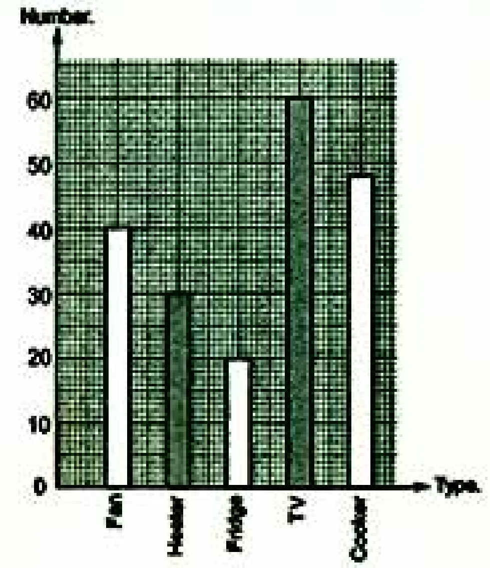
2

City	Cairo	Alex.	Tanta	El-Menia	Aswan
Temperature	30° C	24° C	20° C	35° C	40° C

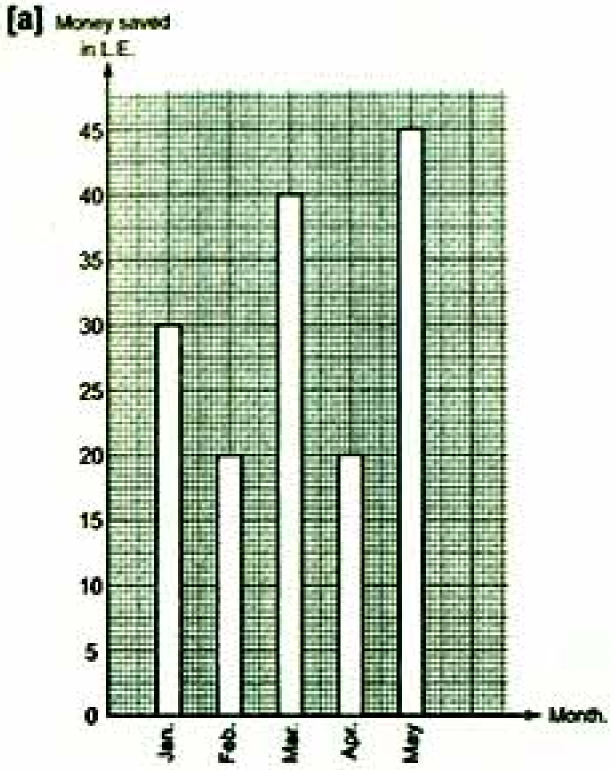
[a] Aswan. [b] Tanta. [c] 20

3

Type	Fan	Heater	Fridge	TV	Cooker
Number	40	30	20	60	48



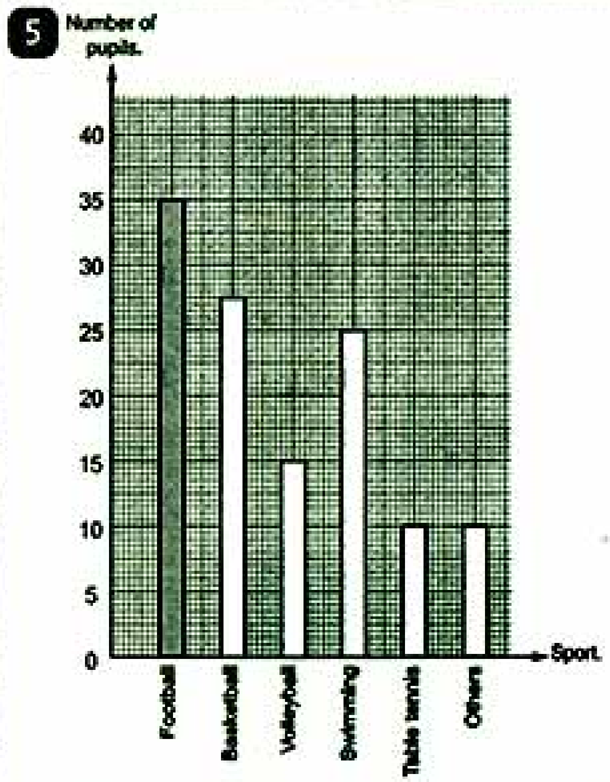
4 [a]



[b] (1) February and April.

(2) L.E. 155

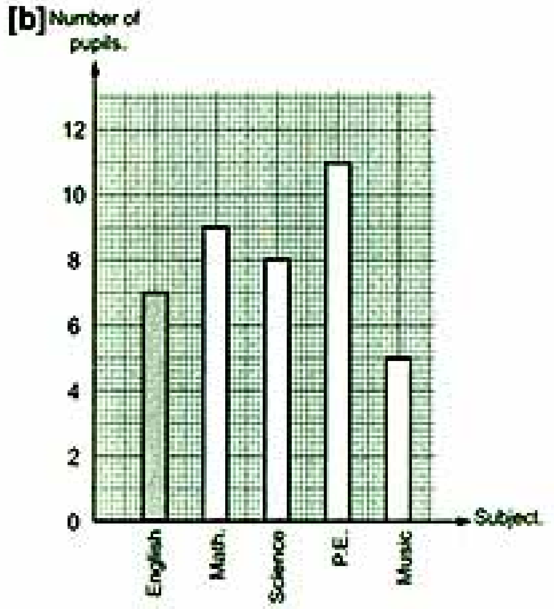
5



6 [a]

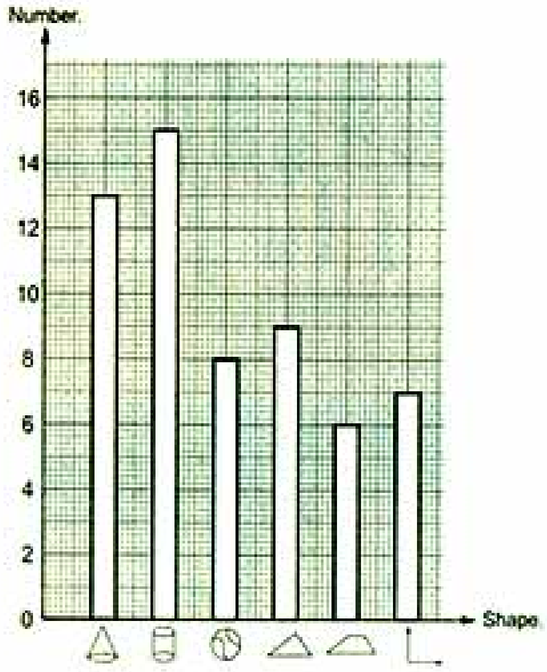
Subject	English	Math.	Science	Physical education	Music
Pupils tallies	𝍸 ǁ	𝍸 ǁǁǁǁ	𝍸 ǁǁǁ	𝍸 𝍸 ǀ	𝍸
Number of pupils	7	9	8	11	5

[b]

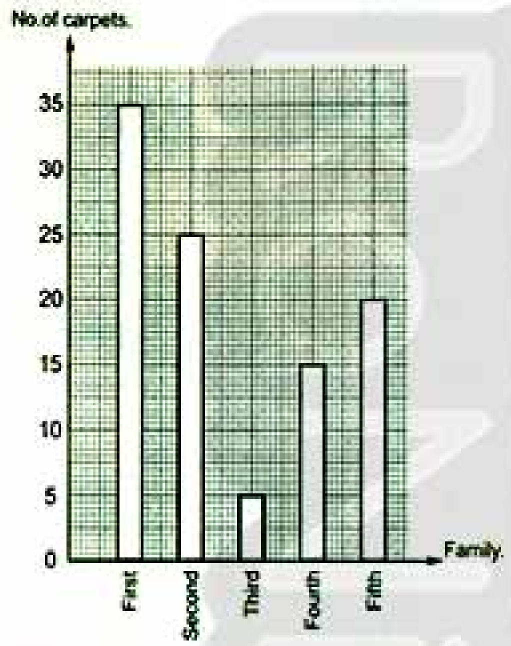


7

Shape	Frequency	Number
	𝍸 𝍸 |||	13
	𝍸 𝍸 𝍸	15
	𝍸 |||	8
	𝍸 ||||	9
	𝍸		6
	𝍸 ||	7

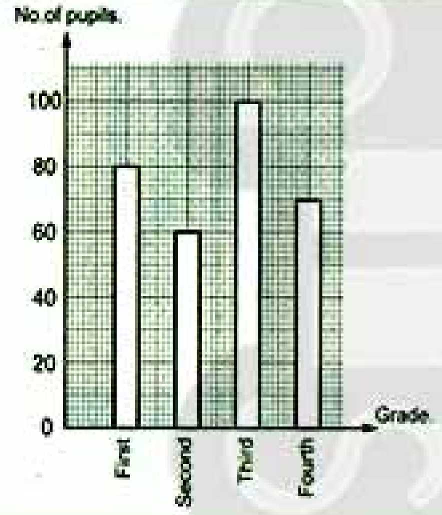


8 First method :

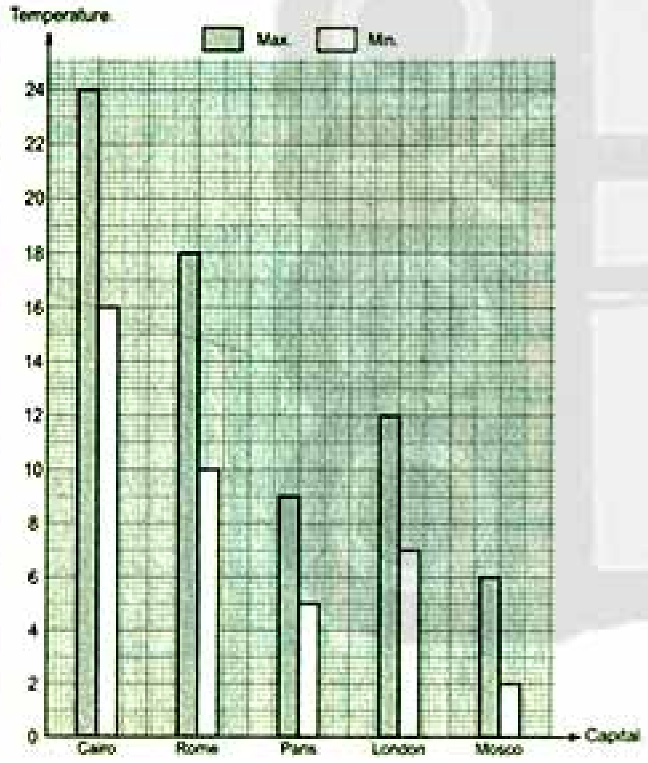


Second method : Represent by yourself.

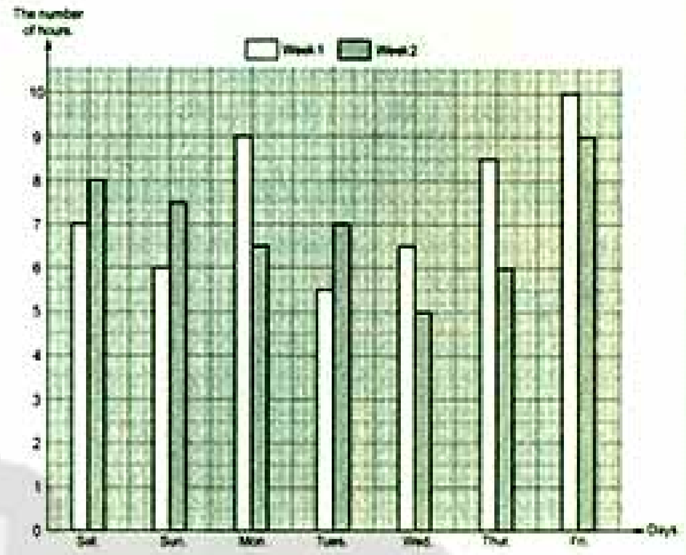
9



10

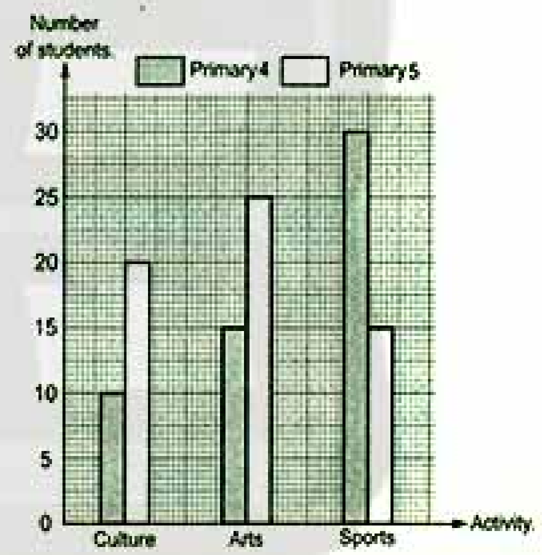


11 [a]



[b] 101.5 hours

12



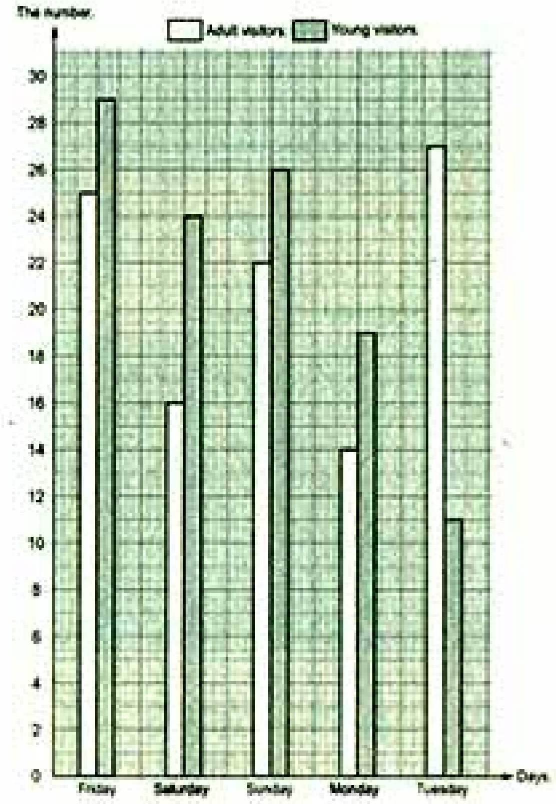
13 [a] Raouf. [b] Hazem. [c] Salma.

[d]

Name	Salma	Raouf	Hazem	Wissam
Marks in math.	18	13	9	18
Marks in science	15	17	12	13

14 [a]

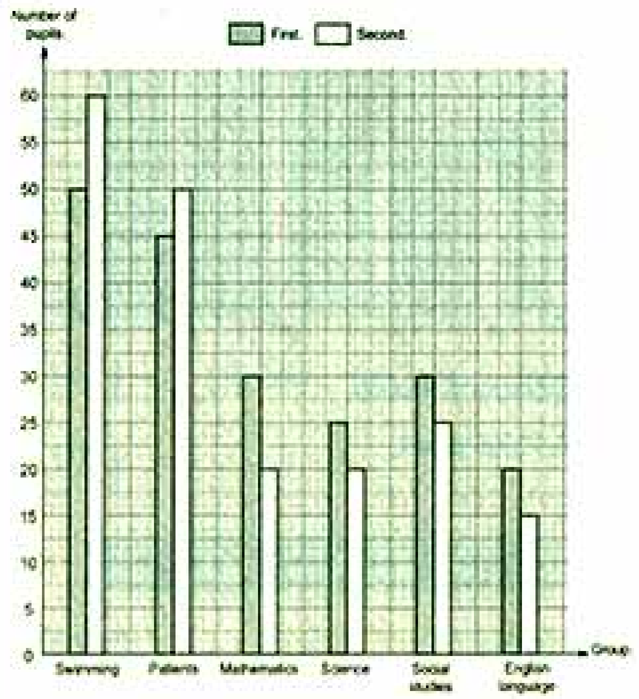
Days	Friday	Saturday	Sunday	Monday	Tuesday
Adult visitors	25	16	22	14	27
Young visitors	29	24	26	19	11



[b] 109 young visitors.

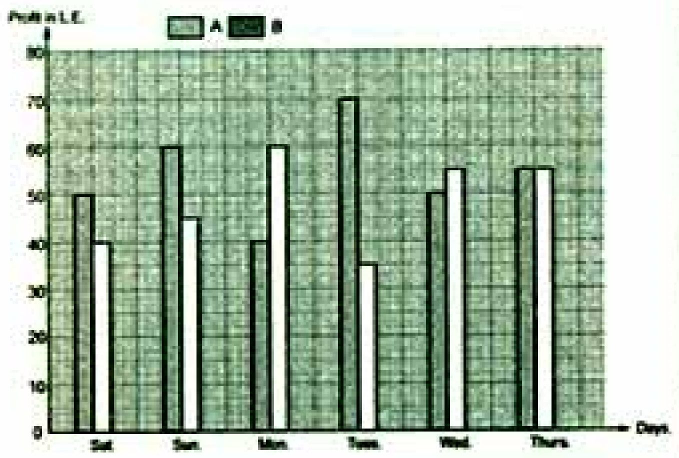
[c] 104 adults visitors.

15

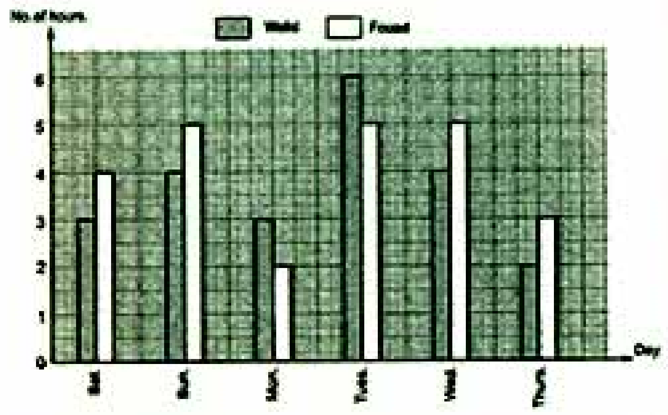


[a] First [b] 110 , 10 [c] First.

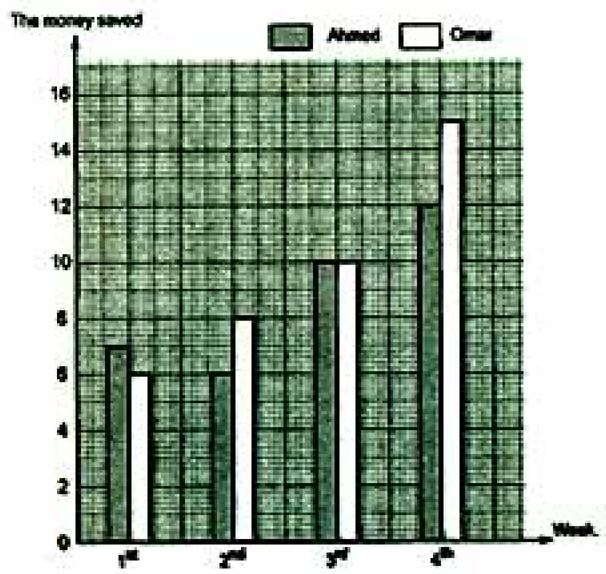
16



17



18



[a] Second week.

[b] Third week.

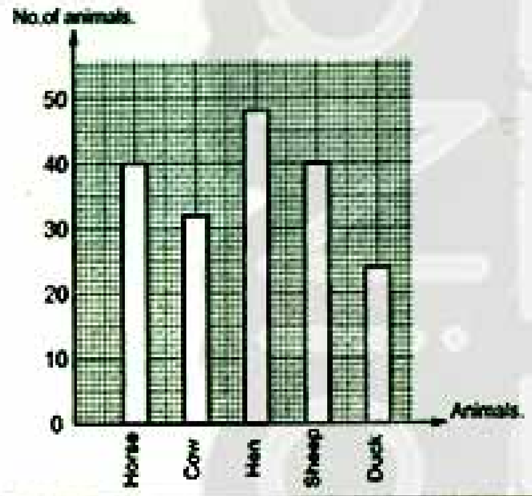
19 [a]

(1)

Animal	Horse	Cow	Hen	Sheep	Duck
No. of animals	40	32	48	40	24

(2) hen , 48 (3) horse and sheep

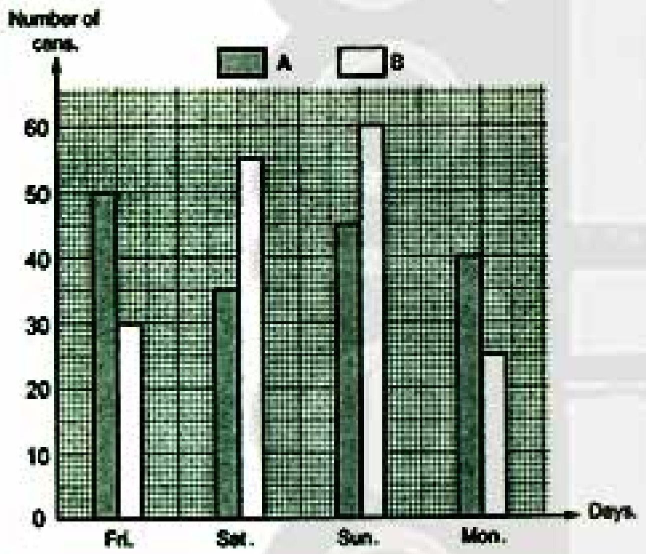
[b]



20 [a]

	Friday	Saturday	Sunday	Monday
Number of canned drinks sold by shop A	50	35	45	40
Number of canned drinks sold by shop B	30	55	60	25

[b]



[c] Shop A = 170 cans , Shop B = 170 cans

[d] Zero.

[e] The profit = 25 × 170 = P.T. 4 250 = L.E. 42.5

21

5 → 2 → 9 → 529
5 → 9 → 2 → 592
2 → 5 → 9 → 259
2 → 9 → 5 → 295
9 → 5 → 2 → 952
9 → 2 → 5 → 925

There are 6 numbers.

22

6 → 3 → 0 → 8 → 6 308
6 → 3 → 8 → 0 → 6 380
6 → 0 → 3 → 8 → 6 038
6 → 0 → 8 → 3 → 6 083
6 → 8 → 0 → 3 → 6 803
6 → 8 → 3 → 0 → 6 830

3 → 0 → 8 → 6 → 3 086
3 → 0 → 6 → 8 → 3 068
3 → 8 → 0 → 6 → 3 806
3 → 8 → 6 → 0 → 3 860
3 → 6 → 0 → 8 → 3 608
3 → 6 → 8 → 0 → 3 680

8 → 0 → 3 → 6 → 8 036
8 → 0 → 6 → 3 → 8 063
8 → 3 → 0 → 6 → 8 306
8 → 3 → 6 → 0 → 8 360
8 → 6 → 0 → 3 → 8 603
8 → 6 → 3 → 0 → 8 630

There are 18 numbers.

Exercise 20

1 [a] impossible. [b] impossible. [c] certain. [d] certain. [e] possible. [f] impossible.

2 [a] zero. [b] 1 [c] 1 [d] $\frac{1}{2}$ [e] $\frac{1}{6}$ [f] 0.8

3 [a] $\frac{5}{8}$ [b] Zero. [c] $\frac{3}{8}$ [d] Zero.

4 [d]

5 P (yellow) = $\frac{1}{5}$, P (blue) = $\frac{1}{5}$, P (red) = $\frac{1}{5}$, P (pink) = $\frac{1}{5}$ and P (green) = $\frac{1}{5}$

6 P (white) = $\frac{3}{23}$

7 P (black) = $\frac{3}{12} = \frac{1}{4}$

8 [a] $\frac{1}{6}$ [b] $\frac{3}{6} = \frac{1}{2}$ [c] $\frac{3}{6} = \frac{1}{2}$ [d] zero. [e] 1 [f] $\frac{3}{6} = \frac{1}{2}$ [g] $\frac{1}{6}$ [h] $\frac{1}{6}$ [i] $\frac{2}{6} = \frac{1}{3}$

9 [a] $\frac{12}{20} = \frac{3}{5}$ [b] $\frac{5}{20} = \frac{1}{4}$ [c] $\frac{1}{20}$ [d] zero. [e] 1

10 [a] $\frac{5}{10} = \frac{1}{2}$ [b] $\frac{1}{6}$ [c] $\frac{3}{15} = \frac{1}{5}$ [d] zero. [e] $\frac{4}{48} = \frac{1}{12}$, $\frac{44}{48} = \frac{11}{12}$ [f] $\frac{3}{8}$ [g] $\frac{1}{3}$

11 [a] $\frac{7}{9}$ [b] $\frac{4}{9}$ [c] $\frac{4}{9}$

12 P (non-pink) = $\frac{17}{25}$

13 [a] $\frac{4}{9}$ [b] $\frac{2}{9}$ [c] $\frac{3}{9} = \frac{1}{3}$ [d] $1 - \frac{4}{9} = \frac{5}{9}$ [e] $1 - \frac{2}{9} = \frac{7}{9}$

14 [a] $\frac{1}{5}$ [b] $\frac{3}{5}$ [c] $\frac{2}{5}$ [d] $\frac{3}{5}$

15 [a] $\frac{5}{22}$ [b] $\frac{8}{22}$ [c] $\frac{3}{22}$ [d] $\frac{6}{22}$

16 [a] $\frac{3}{10}$ [b] $\frac{8}{10}$ [c] $\frac{7}{10}$

17 [a] $\frac{1}{10}$ [b] $\frac{2}{10}$ [c] $\frac{1}{10}$ [d] $\frac{3}{10}$ [e] $\frac{2}{10}$ [f] $\frac{1}{10}$ [g] Zero. [h] Zero.

18 [a] 0 [b] 1 [c] > [d] $\frac{1}{3}$ [e] $\frac{1}{2}$ [f] $\frac{1}{6}$ [g] $\frac{1}{8}$ [h] $\frac{1}{2}$

19 $\frac{5}{10} = \frac{1}{2}$

20 [a] $\frac{3}{6} = \frac{1}{2}$ [b] $\frac{6}{6} = 1$ [c] $\frac{1}{6}$ [d] $\frac{1}{6}$ [e] $\frac{3}{6} = \frac{1}{2}$ [f] Zero. [g] Zero. [h] $\frac{2}{6} = \frac{1}{3}$ [i] $\frac{1}{6}$

Test on unit four

1 (1) 1 (2) $\frac{1}{2}$ (3) observation (4) $\frac{1}{6}$ (5) $\frac{2}{5}$ (6) 1

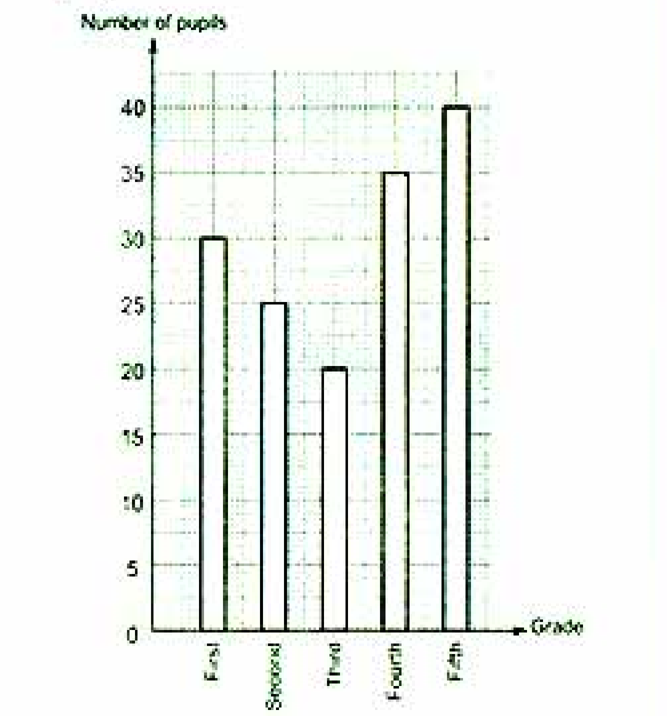
2 (7) 0 (8) $\frac{4}{9}$

(9) noticing , experimenting and field (practical) studies.

(10) $\frac{1}{2}$

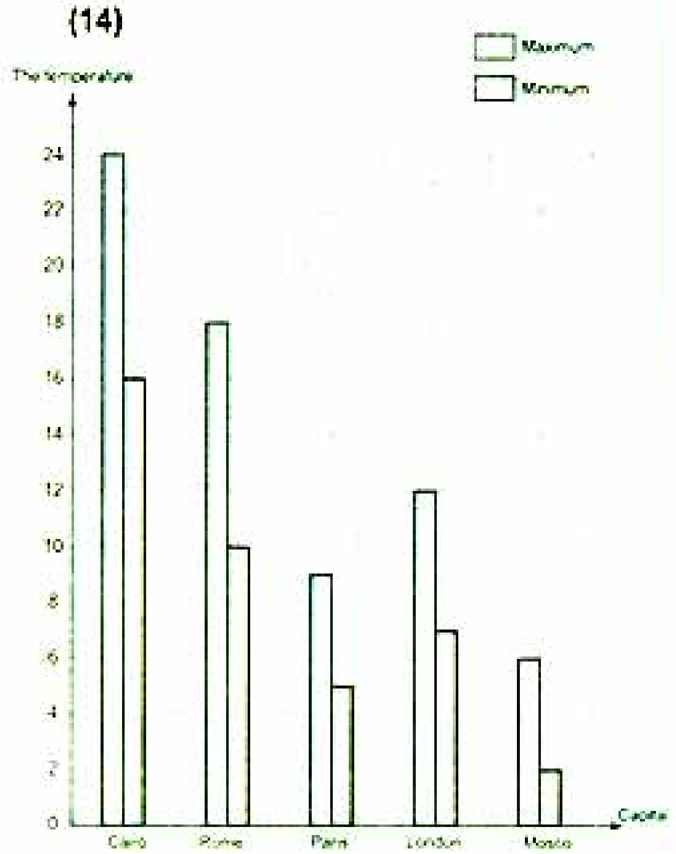
3 (11) [a] $\frac{1}{5}$ [b] $\frac{2}{3}$ [c] $\frac{7}{15}$ [d] zero

(12)



(13) [a] $\frac{1}{2}$ [b] $\frac{2}{5}$ [c] $\frac{3}{10}$ [d] zero

(14)

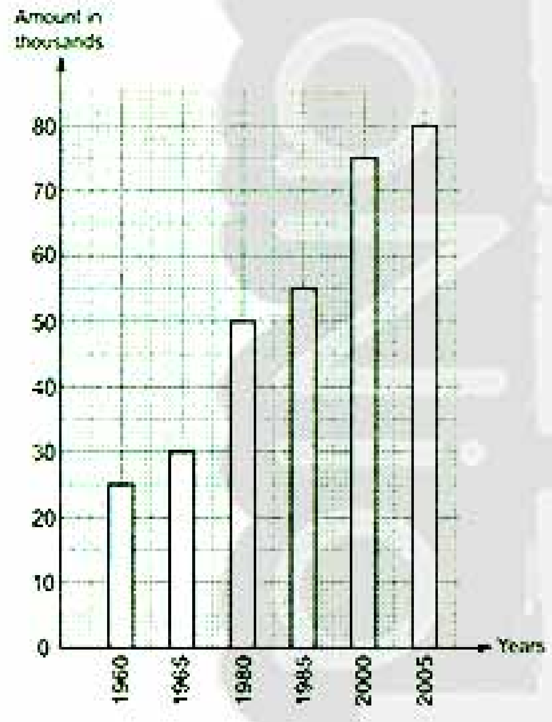


Activities of unit four

1 [a] Bar line graph.

"There are other solutions"

[b]



[c] Answer by yourself.

2 [a]

Year	2002	2004	2006	2008
Money saved	30	50	35	55

[b] 170 pounds.

3 [a] $\frac{3}{12} = \frac{1}{4}$

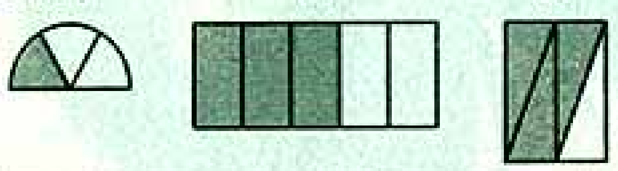
[b] $\frac{8}{12} = \frac{2}{3}$

[c] $\frac{9}{12} = \frac{3}{4}$

Guide Answers of the Worksheets

Sheet 1

1 [a] (1) $\frac{1}{4}$ (2) $\frac{4}{12} = \frac{1}{3}$ (3) $\frac{3}{4}$
[b] (1) (2) (3)



2 [a] 7 , 9 [b] $\frac{6}{7}$ [c] $1 = \frac{5}{5} = \frac{4}{4}$
[d] $\frac{49}{7}$ [e] improper fraction.

3 [a] $\frac{1}{2}$ [b] $\frac{35}{42}$ [c] $\frac{2}{9}$ [d] > [e] 7

4 [a] $\frac{7}{9}$ [b] $\frac{5}{7}$ [c] $\frac{4}{4}$, 1 [d] $\frac{11}{13}$ [e] $\frac{2}{12} = \frac{1}{6}$

5 [a] ✗ [b] ✓ [c] ✗ [d] ✗ [e] ✗

Sheet 2

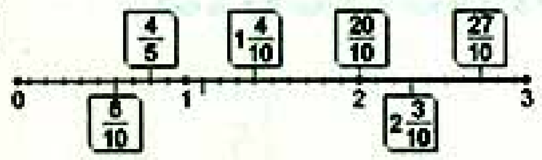
1 [a] an improper fraction.
[b] a proper fraction.
[c] a mixed number.
[d] an improper fraction.
[e] a mixed number.

2 [a] (1) $\frac{15}{7}$ (2) $\frac{53}{10}$ (3) $\frac{11}{6}$ (4) $\frac{69}{7}$
[b] (1) $3\frac{1}{2}$ (2) $3\frac{3}{4}$ (3) $9\frac{1}{7}$ (4) $2\frac{7}{9}$

3 [a] < [b] > [c] < [d] < [e] =

4 [a] $4\frac{3}{4}$ [b] 7 thirds [c] 3
[d] 22 [e] greater than

5



Sheet 3

1 [a] $\frac{5}{6}$ [b] $\frac{1}{20}$ [c] $\frac{17}{12}$
[d] $\frac{1}{2}$ [e] 9

2 [a] $\frac{17}{5}$ [b] $\frac{2}{3}$ [c] $\frac{2}{5}$
[d] $\frac{5}{7}$ [e] $\frac{1}{2}$

3 [a] $\frac{11}{12}$ [b] $\frac{8}{9}$ [c] > [d] $\frac{11}{2}$ [e] $\frac{3}{4}$

4 [a] $\frac{1}{3}$, $\frac{7}{12}$, $\frac{3}{4}$ and $\frac{5}{6}$
[b] $\frac{9}{20}$, $\frac{1}{2}$, $\frac{5}{8}$ and $\frac{7}{10}$
[c] $1\frac{1}{6}$, $\frac{31}{24}$, $\frac{15}{8}$ and $1\frac{11}{12}$

5 [a] $8\frac{7}{10}$ [b] $9\frac{7}{12}$ [c] $5\frac{1}{30}$ [d] $\frac{13}{12}$

Sheet 4

1 [a] 4.3
[b] Twenty three and five tenths.
[c] 9.4 [d] an improper [e] 6.5

2 [a] 389.5 = 3 hundres + 8 tens + 9 units + 5 tenths
[b] 7 [c] 0.5 [d] $4\frac{1}{4}$ [e] $\frac{854}{10}$

3 [a] $\frac{10}{14}$ [b] 624.3 [c] 0.2
[d] 205.7 [e] 2

4 [a] ✗ [b] ✓ [c] ✗ [d] ✗ [e] ✓

5 [a] (1) $\frac{1}{2}$ (2) $\frac{10}{3}$
[b]

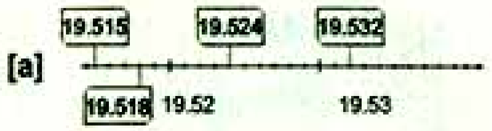
Sheet 5

1 [a] 3.47 [b] $7\frac{3}{100}$ [c] $\frac{4\,747}{100}$
[d] 21.75 [e] 22.35

2 [a] 315.728 = 3 hundreds + 1 ten + 5 units + 7 tenths + 2 hundredths + 8 thousandths
[b] 25.961 = 20 + 5 + 0.9 + 0.06 + 0.001
[c] 0.03
[d] Two and nine hundredths.
[e] 0.5

3 [a] 6 [b] hundredths. [c] 5.03
[d] 0.007 [e] >

4 [a]



[b] (1) 3.①04 (2) 64.③05

5 [a] $\frac{5\,017}{1\,000}$ [b] 40 [c] 0.7
[d] 4.7 [e] $\frac{27}{20}$

Sheet 6

1 [a] 39.471 = 39 + 0.4 + 0.07 + 0.001
[b] 6.542 [c] < [d] $\frac{2\,525}{100}$ [e] $\frac{4}{7}$

2 [a] > [b] = [c] > [d] > [e] >

3 [a] 4.5 [b] 0.9 [c] 0.33 [d] = [e] 20

4 [a] The order is : 4.08 , 4.8 , 4.85 and 8.4
[b] The order is : 0.85 , 0.84 , 0.804 and 0.084

5 [a] (1) 5.13 (2) 8.3 and 10.03
[b] 3.241 and 3.242
(There are other solutions)

Sheet 7

1 [a] 7 [b] 3.55 [c] 1 333.389
[d] 75.021 [e] $2\frac{1}{15}$

2 [a] ✓ [b] ✗ [c] ✗ [d] ✗ [e] ✗

3 [a] 4.44 [b] 0.919 [c] 4.25 [d] < [e] 20

4 [a] 38.78 [b] 45.965
[c] 190.304 [d] 455.375

5 [a] (1)

```
   3 . 2 [6]
 + 5 .[5] 3
 ----------
  [8]. 7 9
```

(2)

```
    8 3 . 5 7
 - [5][8]. 7 3 4
 ---------------
    2 4 . [8][3][6]
```

[b] They have = 3.95 + 6.3 = L.E. 10.25

Sheet 8

1 [a] 90 [b] 0 [c] 0.7 [d] 220 [e] 10

2 [a] 50 [b] 950 [c] 10 [d] 10 [e] >

3 [a] 6 [b] 9 [c] 3517 ≃ 3520
[d] 5 [e] 744

4 [a] 114 244 ≃ 114 240
[b] 474.43 ≃ 470 [c] 89.7 ≃ 90
[d] 15 ≃ 20 [e] 3.003 ≃ 0

5 [a] The numbers are : 200 , 201 , 202 , 203 , 204 , 195 , 196 , 197 , 198 and 199
[b] He paid = 1 346.4 + 925.8 = L.E. 2 272.2
≃ L.E. 2 270

Sheet 9

1 [a] 100 [b] 500 [c] 6.905
[d] = [e] 6 000

2 [a] < [b] < [c] = [d] > [e] <

3 [a] 7.77 [b] 240 [c] 54.7
[d] $\frac{29}{35}$ [e] 5.7

4 [a] 3 767.7 ≃ 4 000
[b] 4 700.7 ≃ 4 700 [c] 12 488 ≃ 12 000
[d] 100 [e] 12.28 ≃ 10

5 [a] 550
[b] The distance = 7 300 × 3 = 21 900 m.
≃ 22 000 m.

Sheet 10

1 [a] 10 000 [b] 500 000 [c] 10 000
[d] 62 000 000 [e] 8

2 [a] 200 000 [b] 260 000 [c] 10 000
[d] 10 000 [e] 100 000

3 [a] 620 [b] 7000 [c] 100 000

4 [a] 80 642 ≃ 80 000
[b] 890 441 ≃ 900 000

[c] 12 125.485 ≃ 10 000
[d] 62 163.002 ≃ 100 000
[e] 4 623.281 ≃ 5 000

5 [a] $\frac{43}{10}$ [b] 12 [c] $\frac{1}{4}$
[d] 0.7 [e] $4\frac{1}{5}$

Sheet 11

1 [a] 74 [b] 149
[c] 0.3 , 0.4 (There are other solutions)
[d] 16 [e] 300

2 [a] 15 [b] 98 [c] 2 [d] 3 [e] 3

3 [a] ✓ [b] ✗ [c] ✗ [d] ✓ [e] ✗

4 [a] 13.92 ≃ 10 [b] 63.45 ≃ 63
[c] 539.07 ≃ 500 [d] 3.64 ≃ 4

5 [a] 0.7 [b] 42.3 [c] 0.214
[d] 1 [e] 21.4

Sheet 12

1 [a] 2.4 [b] 40 [c] 6.1
[d] 10 000 [e] 8.65 , 8.7

2 [a] ✗ [b] ✓ [c] ✗ [d] ✓ [e] ✗

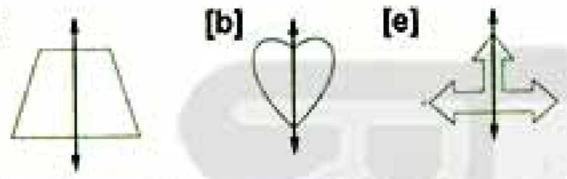
3 [a] 14 [b] 400 [c] 0.81
[d] 1 000 [e] 60

4 [a] 22.237 ≃ 22.2 [b] 454.596 ≃ 454.6
[c] 1.75 ≃ 1.8 [d] 162.63 ≃ 200

5 [a] (1) 5 "There are other solutions".
(2) 1 "There are other solutions".
[b] 0.1567 ≃ 0.2

Sheet 13

1 [a] equal in length , equal in measure
[b] C [c] $\overline{AU}$
[d] to the side length [e] $\overline{YZ}$

2 [a] [b] [e]


3 [a] $\overline{XY}$ [b] C [c] FA [d] D

4 [a] $\overline{YE}$ [b] M [c] MN , 3
[d] A , 45 [e] 55

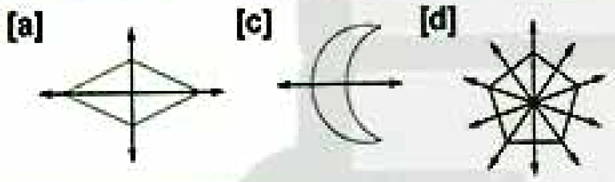
5 [a] 1.1 [b] tenth [c] 158.7
[d] 457 [e] 5.07

Sheet 14

1 [a] 10.007 ≃ 10 [b] 2.058 ≃ 2
[c] tens. [d] 149.921 ≃ 100 [e] 2

2 [a] 2 [b] 1 [c] 0 [d] 0 [e] 0

3 [a] ✓ [b] ✗ [c] ✗ [d] ✓ [e] ✗

4 [a] [c] [d]


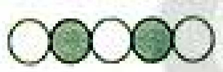
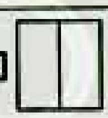
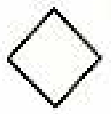
5 [a] (1) 33.4 (2) 25
[b] 0.45 , 0.54 , 4.5 and 5.4

Sheet 15

1 [a] $7\frac{2}{10}$ "or $7\frac{1}{5}$"
[b] 10.321 = 10 + 0.3 + 0.02 + 0.001
[c] 0.255 ≃ 0 [d] 1.973 ≃ 2 [e] 3

2 [a] ✓ [b] ✗ [c] ✓ [d] ✗ [e] ✓

3 [a] $\overline{DC}$ [b] 0.06 [c] CAB
[d] 81 [e] >

4 [a]  [b] 
[c]  [d] D , W

5 [a] 0.75 [b] $4\frac{1}{2}$ [c] 6
[d] 1 000 [e] 21.40

Sheet 16

1 [a] 4 [b] 6 000 [c] 2 000
[d] 7 750 [e] 5.241 ≃ 5

2 [a] = [b] < [c] > [d] > [e] <

3 [a] 50 litres [b] 20 litres [c] 2 L
[d] 2 dm^3 [e] $\frac{1}{8}$ L

4 [a] The order is : 250 mL , $\frac{3}{4}$ L , 1 L and $1\frac{1}{4}$ dm^3
[b] The order is : 20 L , 3 000 cm^3 , $2\frac{3}{4}$ dm^3 and 2 000 mL

5 [a] 3 [b] $\frac{29}{35}$ [c] 4.957
[d] 3 [e] 0.4

Sheet 17

1 [a] 6 250 [b] $3\frac{3}{4}$ [c] 250
[d] 3 [e] 2 324.42 ≃ 2 000

2 [a] tons. [b] grams. [c] kilograms.
[d] 150 kilograms. [e] 2 kg.

3 [a] > [b] = [c] < [d] < [e] <

4 [a] The order is : 7 000 kg. , 800 000 gm. , 789 kg. and $\frac{1}{2}$ ton.
[b] The order is : 4 750 gm. , 47 kg. , 49 570 gm. and 7 tons.

5 [a] 1.8 [b] 15.5 [c] 181
[d] 2 , 6 [e] $\frac{9}{11}$

Sheet 18

1 [a] 7 000 000 [b] 6 [c] 5 ≃ 10
[d] 150 [e] 36

2 [a] > [b] > [c] = [d] < [e] <

3 [a] 30 minutes [b] 3 minutes
[c] 8 hours [d] 5 minutes
[e] 90 minutes

4 [a] The order is : 24 minutes , 3 600 seconds , $\frac{2}{3}$ a day and 1 week.
[b] The order is : 1 week , $\frac{1}{3}$ day , 3 600 seconds , 44 minutes.

5 8 : 15 p.m.

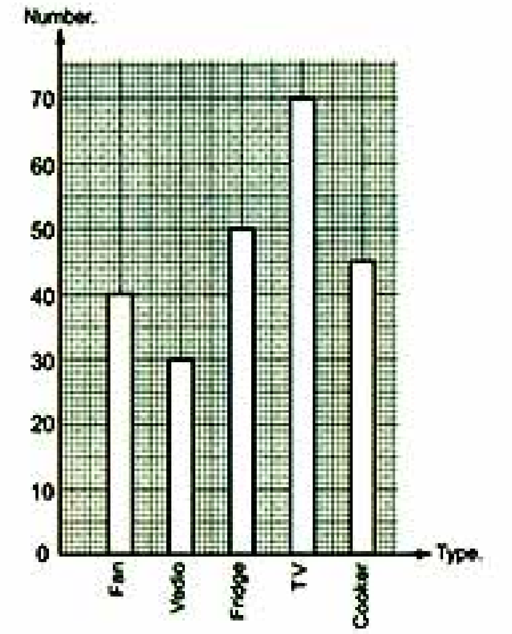
Sheet 19

1 [a] 0.001 [b] 18.3
[c] 54 [d] 8.8
[e] noticing , experimenting and field (practical) studies.

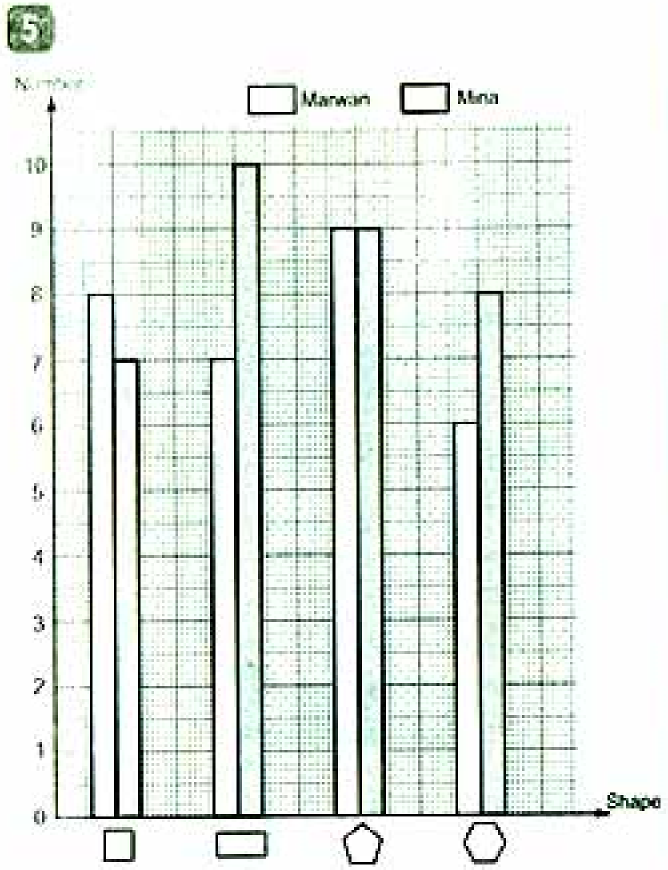
2 [a] 4 [b] 2.8 [c] 20
[d] 8.8 [e] 1 900

3

Sport	Football	Volleyball	Swimming	Table tennis
Number of pupils	30	45	35	60

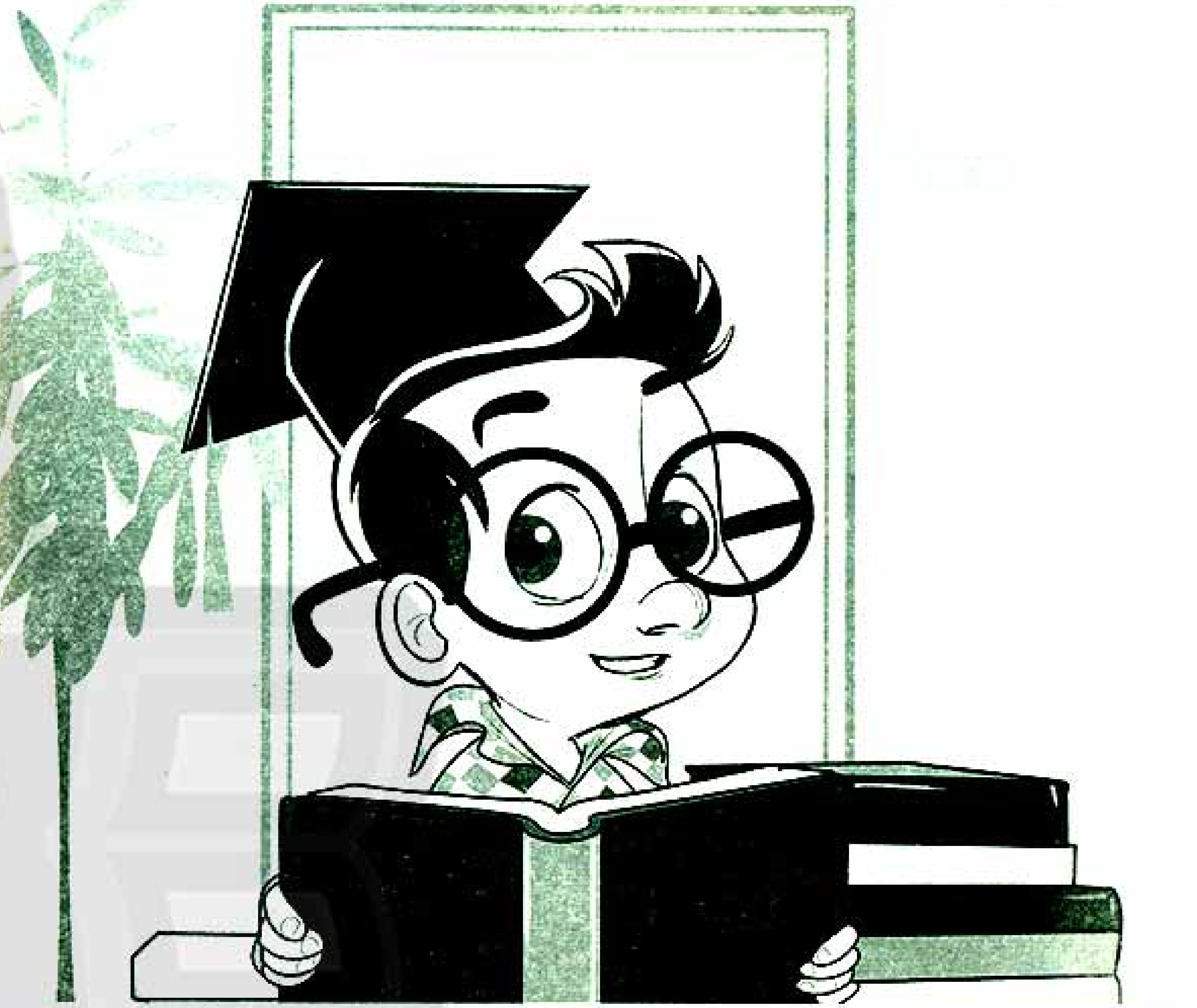
4


5



Sheet 20

1. [a] Thousands. [b] 7.5 [c] 5 750
   [d] 1 [e] $\frac{1}{2}$
2. [a] 0 [b] $\frac{1}{6}$ [c] >
   [d] 1 [e] 5
3. [a] $\frac{3}{6} = \frac{1}{2}$ [b] $\frac{3}{6} = \frac{1}{2}$ [c] $\frac{3}{6} = \frac{1}{2}$
   [d] $\frac{3}{6} = \frac{1}{2}$
4. [a] $\frac{7}{20}$ [b] $\frac{4}{20} = \frac{1}{5}$ [c] $\frac{14}{20} = \frac{7}{10}$
5. 18 pounds



Guide Answers of Final Examinations

2019

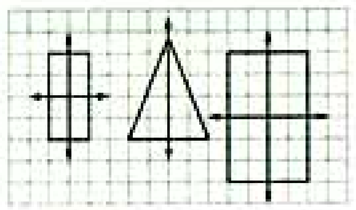
Answers of model examinations of the school book

Model 1

1 (1) 0.07 (2) 1 (3) $3\frac{2}{5}$
(4) congruent (5) 0.645 (6) <
(7) 4 (8) $\frac{1}{2}$ (9) 3 500
(10) 6 500 (11) observation (12) 3.05
(13) 32.79 (14) 3 (15) 180
(16) 0.78

2 (17) $\frac{5}{5}$, 1 (18) 8 000 (19) $\frac{1}{2}$
(20) 2 (21) 1.1
(22) △□□□□

3 (23) 49.729 , 50
(24) What she paid = 34.75 + 26.3
= 61.05 pounds.
The remainder = 100 – 61.05
= 38.95 pounds.
(25) $\frac{3}{5}$
(26)
[a] [b] [c]

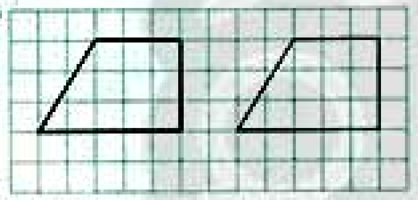


Model 2

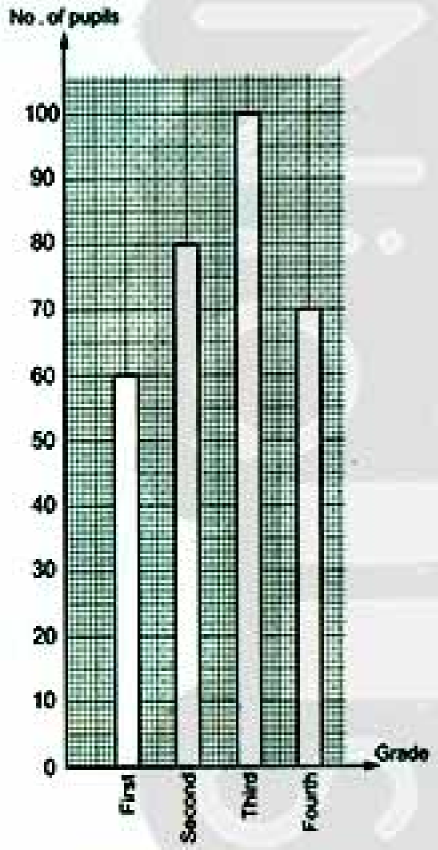
1 (1) 1 (2) 9 000 (3) 4 (4) 1
(5) 72 (6) 0.08 (7) 0.375 (8) $\frac{1}{2}$
(9) > (10) congruent
(11) a square of side length 5 cm.
(12) 567.5 (13) $\frac{3}{5}$ (14) 75
(15) $\frac{1}{2}$ (16) 1

2 (17) $\frac{1}{4}$ (18) 3 500 (19) 0
(20) 4.14 (21) 7.005
(22) the two dimensions of one of them equal the two dimensions of the other

3 (23) The order is : 5.08 , 5.8 , 8.05 , 8.5 and 58
(24) 46.235
(25)



(26)

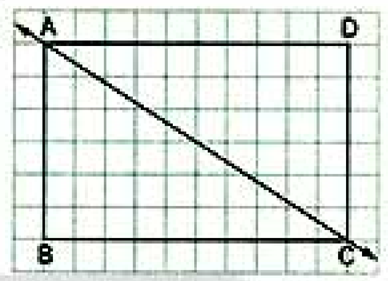


Model 3

1 (1) 0.046 (2) 500 (3) =
(4) 100 (5) 2 (6) 9.7
(7) 0 (8) 0.04 (9) 1
(10) $\frac{22}{3}$ (11) $\frac{1}{2}$ (12) 0.735
(13) 658 (14) 7 500 (15) $\frac{2}{5}$

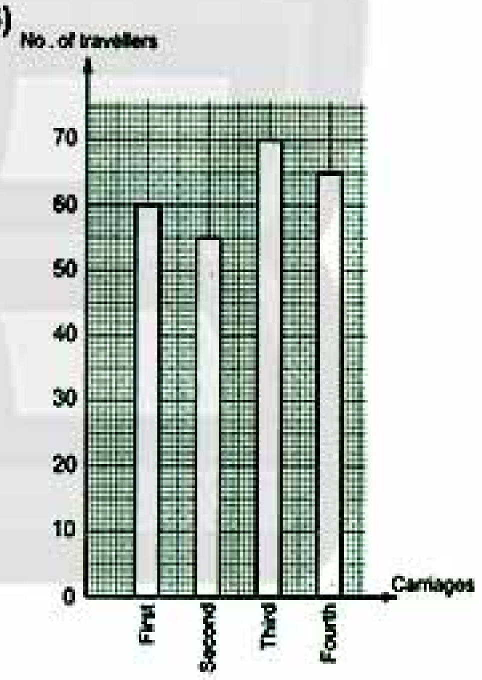
2 (16) ○△△△△○
(17) the two dimensions of one of them equal the two dimensions of the other
(18) 1 (19) $\frac{1}{2}$ (20) 45
(21) $\frac{1}{2}$ (22) 4.03 , 4.0

3 (23) 18.11 , 18
(24) What he paid = 12.75 + 17.25
= 30 pounds.
The remainder = 35 – 30 = 5 pounds.
(25) [a] Rectangle [b] 2
[c]

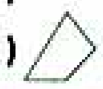


"There is another solution"

(26)



Model examination for the special needs students

1 (1) 1 (2) 0.3
(3) < (4) 6 500
(5) 5 000 (6) 35.4
(7) 2 (8) 0
(9)  (10) 5

2 (11) 0.3 (12) 1
(13) 0.03 (14) 3
(15) $\frac{1}{2}$

3 (16) 45 (17) 0.4
(18) 0.3 (19) 3
(20) 4

Answers of Schools' Examinations

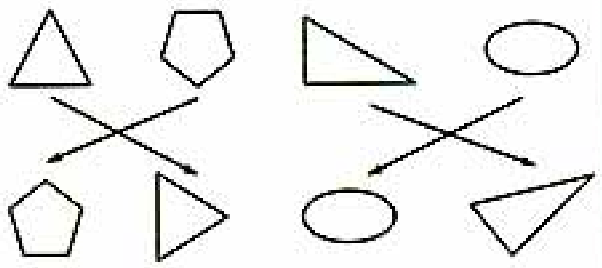
1 Cairo

1 (1) 4.03 (2) 1 (3) 33 000
(4) 1 500 (5) 8.063 (6) 1
(7) AB (8) $35\frac{6}{10}$

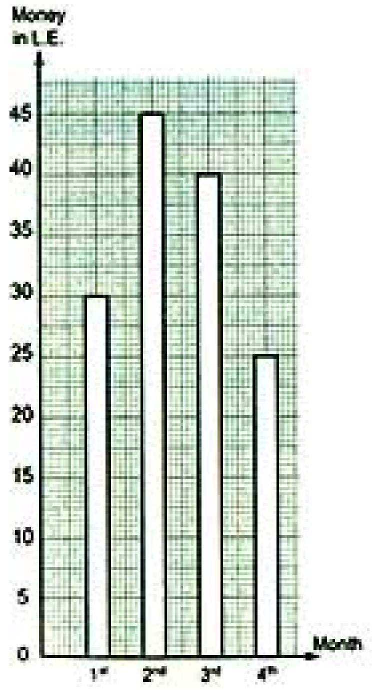
2 (9) 180 (10) square (11) 0.09
(12) 50 (13) $\frac{8}{15}$ (14) <
(15) 0.39 (16) 0

3 (1) 5 000 (2) 142.25 , 142.3
(3) Seventy five and four hundredths
(4) 11.34 (5) $\frac{7}{10}$
(6) parallelogram , zero

4 (1) The order is : 12.95 , 9.08 , 9.012 and 8.774
(2) Mohammad paid = 7.85 + 3.75 = L.E. 11.6
(3)



(4)

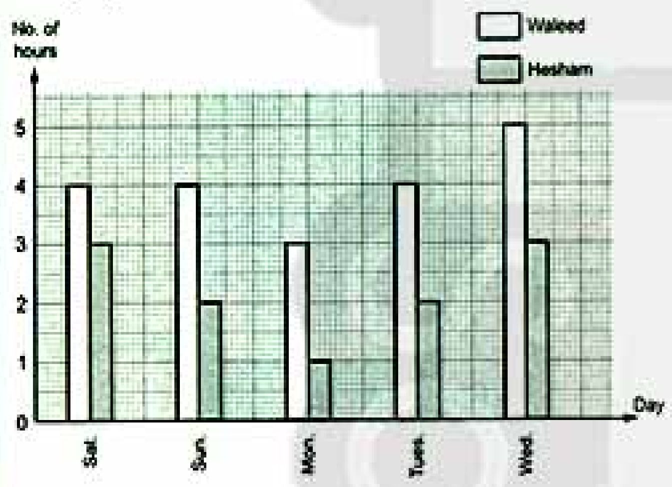


2 Cairo

1 (1) 240 (2) 2 (3) =
(4) 0.3 (5) 0.4 (6) =
(7) < (8) $\frac{1}{2}$ (9) 2.5
(10) 6 (11) 6 (12) $\frac{11}{5}$
(13) 48 (14) 3.08

2 (1) $\frac{9}{20}$ (2) YZ (3) 3.45
(4) 4 (5) 64.08 , 64 (6) 2.2
(7) 0 (8) 6

3 (1) [a] $\frac{2}{9}$ [b] $\frac{2}{9}$ [c] $\frac{5}{9}$ [d] 0
(2) The remainder = 48.8 – 36.7
= 12.1 pounds.
(3) [a] 3 [b] 4 [c] Y [d] $\overline{XZ}$
(4)

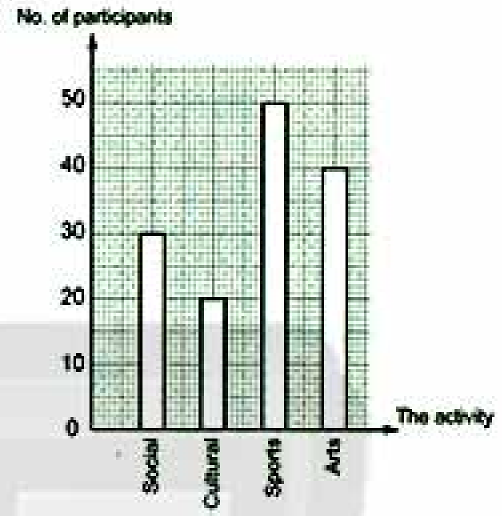


3 Cairo

1 (1) $\frac{1}{2}$ (2) 6.84 (3) 0.08
(4) $\frac{3}{5}$ (5) 5 000 (6) 9.7
(7) 2 (8) < (9) 3
(10) 1 000 (11) 250 (12) 0
(13) 7.77 (14) litre (15) 1
(16) congruent

2 (1) 4.769 , 4.8 (2) 1
(3) tenths (4) XZ (5) 3 000
(6) 6

3 (1) The remainder = 48.8 – 13.75
= 35.05 pounds.
(2) [a] $\frac{1}{5}$ [b] $\frac{1}{3}$
(3) 7
(4)



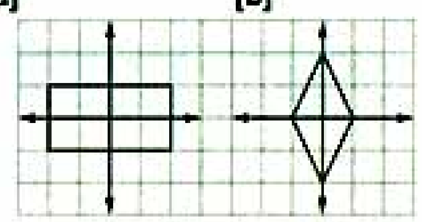
4 Cairo

1 (1) 0.08 (2) $\frac{18}{5}$ (3) 4
(4) 567 (5) 72 (6) 0
(7) 0.125 (8) $\frac{1}{2}$

2 (9) C (10) 1 (11) 4 500
(12) 5.487 (13) = (14) 100
(15) $\frac{3}{5}$ (16) 1

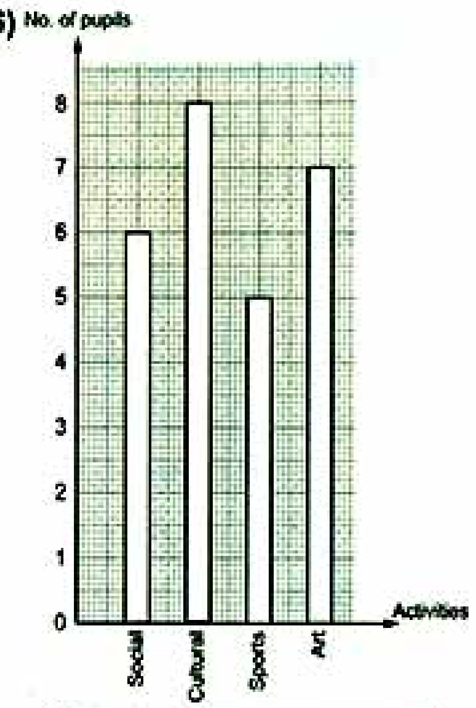
3 (17) $\frac{7}{8}$ (18) $\frac{3}{8}$ (19) 7.5
(20) 1 500 (21) $\overline{OP}$ (22) 2.31 , 2.3

4 (23) The order is : 4.07 , 4.7 , 7.04 , 7.4 and 47
(24) [a] [b]



(25) The left = 52 – 27.75 = 24.25 pounds.

(26)

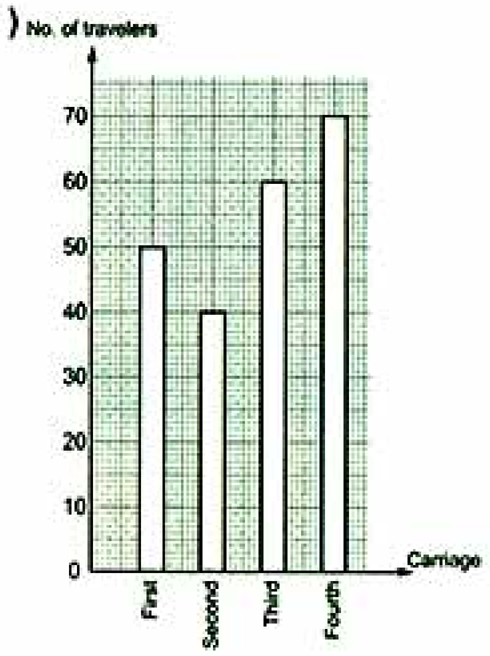


5 Giza

1 (1) 4.03 (2) $\frac{1}{2}$ (3) Y
(4) 4 (5) 0.04 (6) $\frac{13}{3}$
(7) equal in length (8) 5 500
(9) $\frac{5}{4}$ (10) 6 (11) >
(12) 42.37 (13) = (14) 0
(15) 48 (16) >

2 (1) 5.2 (2) $\frac{27}{20} = 1\frac{7}{20}$ (3) 152 000
(4) tenths (5) 1 (6) 1

3 (1) 49.27 , 50
(2) [a] $\frac{7}{11}$ [b] $\frac{2}{11}$
(3) [a] R [b] $\overline{PQ}$ [c] $\overline{QR}$ [d] A
(4)

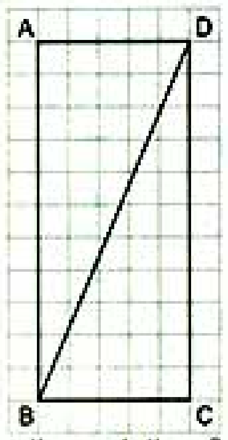


6 Giza

1 (1) 7.8 (2) 0.3 (3) 360
(4) one line (5) 5.8 (6) 3 tons
(7) congruent (8) 1 (9) 164.7
(10) $\frac{1}{2}$ (11) 0.755 (12) 3
(13) 0 (14) > (15) $\frac{3}{5}$
(16) 21.3

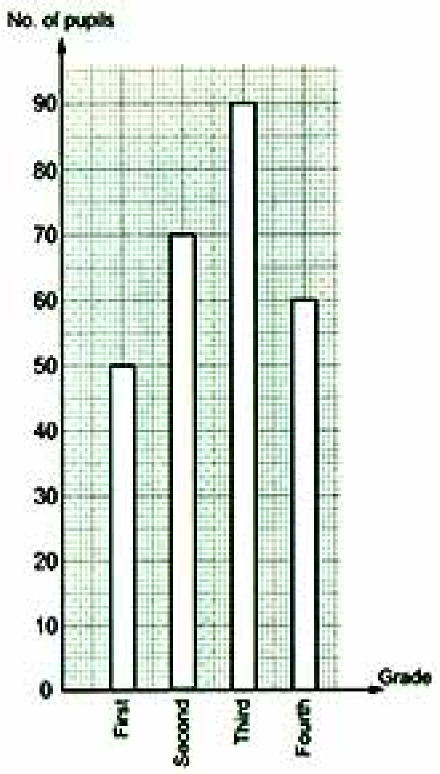
2 (17) $\frac{5}{8}$ (18) 6.14 (19) $\frac{1}{2}$
(20) 1.2 (21) congruent (22) 3

3 (23) 139.3 , 139
(24) The money paid = 34.75 + 24.5
= 59.25 pounds.
The money left = 100 – 59.25
= 40.75 pounds
(25) [a] Rectangle [b] 2
[c]



"There are other solutions"

(26)

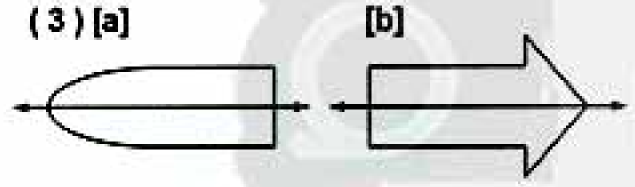


7 Alexandria

1 (1) 18 (2) 67.38 (3) <
(4) 0.04 (5) 0.006 (6) 0.77
(7) 4 (8) 500 minutes
(9) 0 (10) 6 750 (11) 30 gm.
(12) 13.6 (13) zero (14) 1.25
(15) 0 (16) 0.5

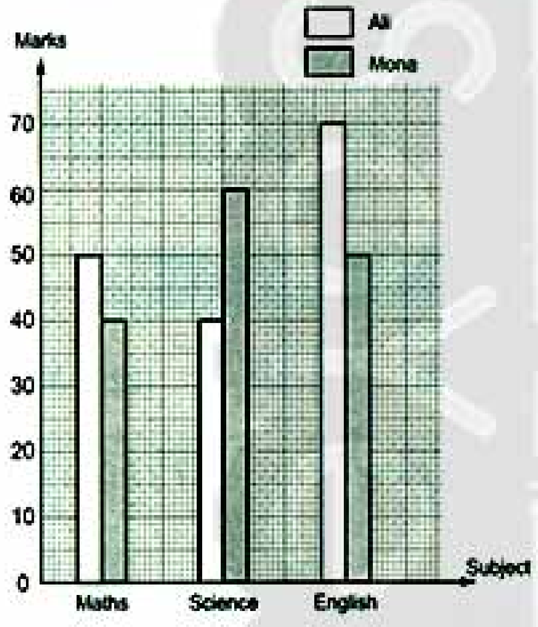
2 (1) 65 000 (2) $\frac{3}{5}$ (3) 362.18
(4) MN (5) 5 000 (6) $\frac{1}{2}$

3 (1) The remainder = 398.5 – 276.75
= 121.75 pounds.
(2) 2 595.191 , 2 600
(3) [a] [b]



(4)

Subject / Name	Maths	Science	English
Ali	50	40	70
Mona	40	60	50



8 Alexandria

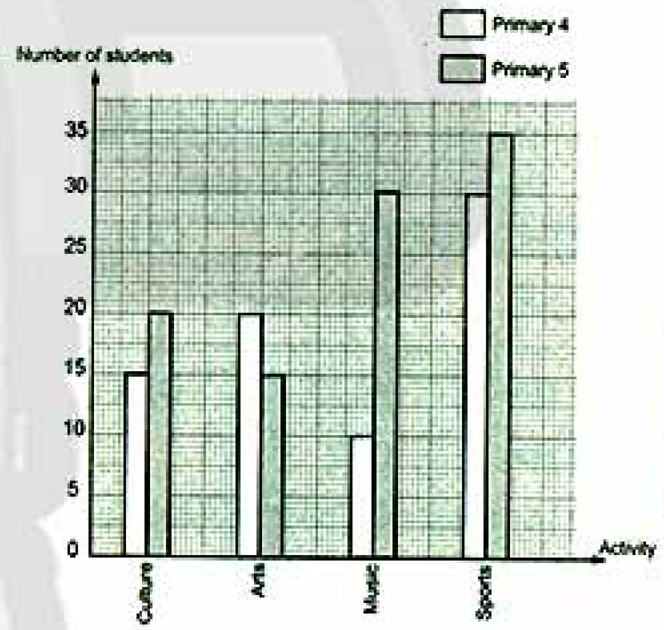
1 (1) 4.07 (2) 8 (3) $\overline{XY}$
(4) 0.5 (5) 71.7

(6) hundredths (7) 7.5 (8) unit
(9) $\frac{13}{35}$ (10) 65 (11) 0.07
(12) 1 (13) 2.57
(14) congruent (15) 180 (16) 3 800

2 (17) $2\frac{1}{5}$ (18) 36 (19) 1
(20) 18.27 , 18.3
(21) 32.626 , 33 (22) 44.14

3 (23) The order is : 0.088 , 0.82 , 1 and 1.9
(24) The remainder = 100 – 38.25
= L.E. 61.75
(25) [a] $\overline{XY}$ [b] $\overline{YZ}$ [c] A [d] Z
(26)

Activity / Grade	Culture	Arts	Music	Sports
Primary 4	15	20	10	30
Primary 5	20	15	30	35

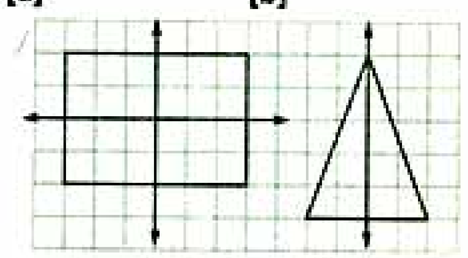


9 El-Kalyoubia

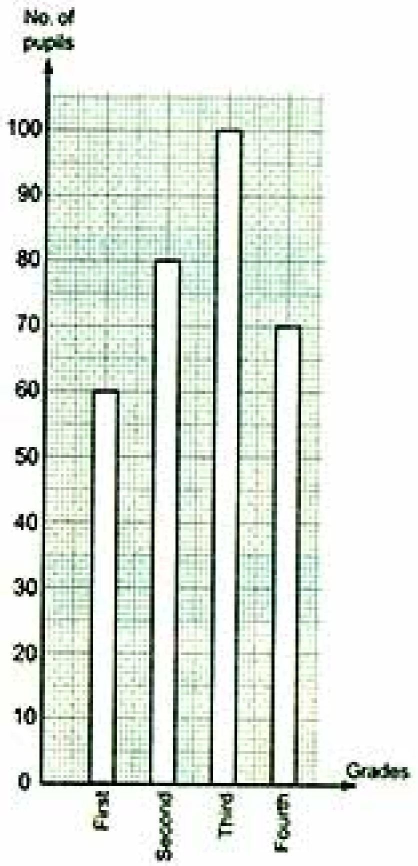
1 (1) 0 (2) 4 (3) 3 500
(4) $3\frac{2}{5}$ (5) $\frac{1}{2}$
(6) congruent (7) 72 (8) 1
(9) $\frac{1}{2}$ (10) $\frac{3}{5}$ (11) 32.79
(12) 6 500 (13) 0.046 (14) 0.735
(15) > (16) 0.05

2 (17) 1
(18) the two dimensions of one of them equal the two dimensions of the other
(19) 8.5 (20) $\frac{1}{4}$ (21) 4.14
(22) 3

3 (23) The price of the toy and the dress
= 34.75 + 26.5 = 61.25 pounds.
The left with her = 100 – 61.25
= 38.75 pounds.
(24) $\frac{1}{5} + \frac{2}{3} = \frac{3}{15} + \frac{10}{15} = \frac{13}{15}$
(25) [a] [b]



(26)



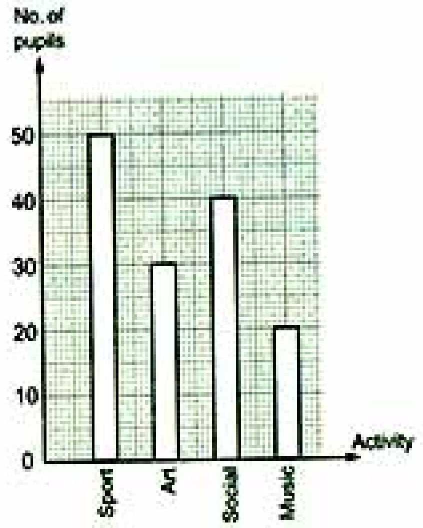
10 El-Sharkia

1 (1) 7 650 (2) $\frac{1}{2}$ (3) 2
(4) 0.09 (5) 24 (6) $1\frac{2}{3}$
(7) 10 (8) Kilogram
(9) 32.79 (10) congruent

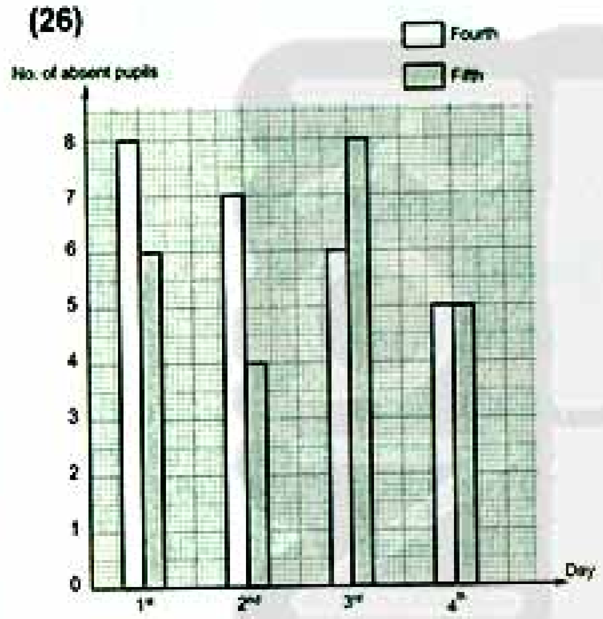
(11) 1 (12) > (13) $\overline{XL}$
(14) zero (15) > (16) 500

2 (17) $\frac{5}{6}$ (18) equal (19) 90
(20) $\frac{11}{5}$ (21) B (22) 0

3 (23) The order is : 8.5 , 8.05 , 5.8 and 5.08
(24) The remainder = 98.9 – 76.7
= 22.2 pounds.
(25) [a] $\frac{6}{11}$ [b] $\frac{3}{11}$
(26)



(26)



11 El-Monofia

1 (1) 80 (2) 2.05 (3) Kilometre
(4) 0.4 (5) 32.79 (6) $3\frac{2}{5}$
(7) 0.645 (8) 1
(9) congruent (10) 0.5 (11) =
(12) 6 (13) XZ (14) >
(15) $\frac{5}{8}$ (16) 1

2 (17) 0 (18) $\frac{5}{6}$ (19) 76.8
(20) $\frac{1}{4}$ (21) equal , equal
(22) 25

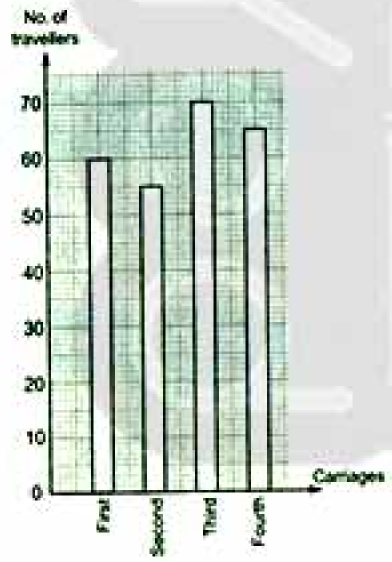
3 (23) The order is : 5 L , 6 500 mL , 9 000 mL and $26\frac{1}{4}$ L
(24) 7.7 , 10
(25) [a] Isosceles trapezium [b] 1

12 El-Gharbia

1 (1) 36 (2) 5 007 (3) 1
(4) $3\frac{2}{5}$ (5) 6 500 (6) $4\frac{3}{4}$
(7) 0.561 (8) 60
(9) congruent (10) 0.645 (11) 0.07
(12) 205 (13) $\frac{1}{4}$ (14) 100
(15) $3\frac{1}{2}$ (16) 49.7

2 (1) The side length of one of them equals the side length of the other
(2) 60 , 3 600 (3) $\frac{1}{2}$ (4) 0.001
(5) $\frac{22}{3}$ (6) tenths

3 (1) [a] $\overline{XY}$ [b] $\overline{ZX}$ [c] A , 40°
(2) [a] $\frac{1}{3}$ [b] 0
(3) She paid = 65.75 + 17.5 = 83.25 pounds.
(4)

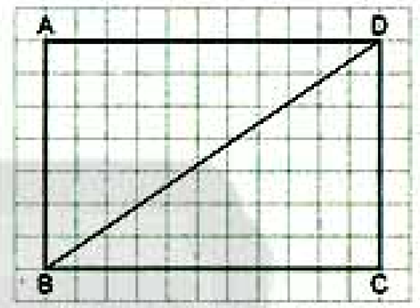


13 El-Dakahlia

1 (1) $\frac{3}{8}$ (2) 6 500 (3) 3
(4) 45 (5) $\frac{1}{2}$ (6) 49.729

2 (1) 4.03 (2) 1 (3) 0.735
(4) 46 (5) 3 500
(6) congruent (7) 0 (8) 1.1

3 [a] (1) 2
(2)

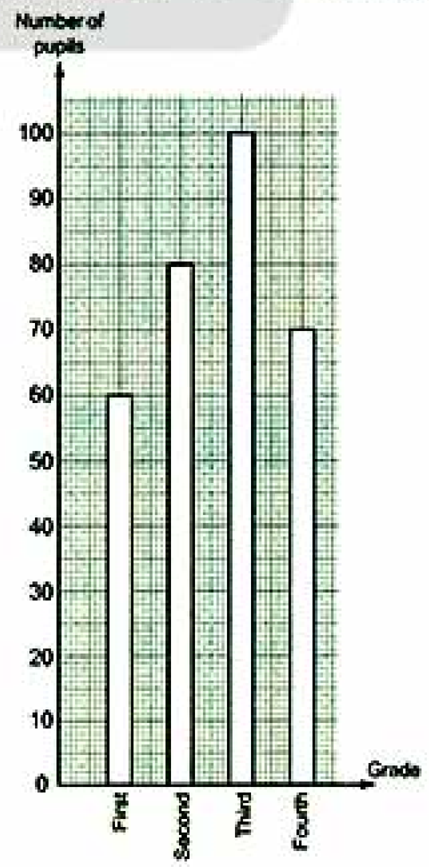


(There are other solutions)

[b] 5 km.

4 (1) 5 (2) 1 (3) 4.14
(4) $3\frac{2}{5}$ (5) 0.07 (6) 567.5
(7) 4 (8) 7.005

5 [a] What he paid = 12.75 + 17.25
= 30 pounds.
The remainder = 35 – 30 = 5 pounds.
[b]

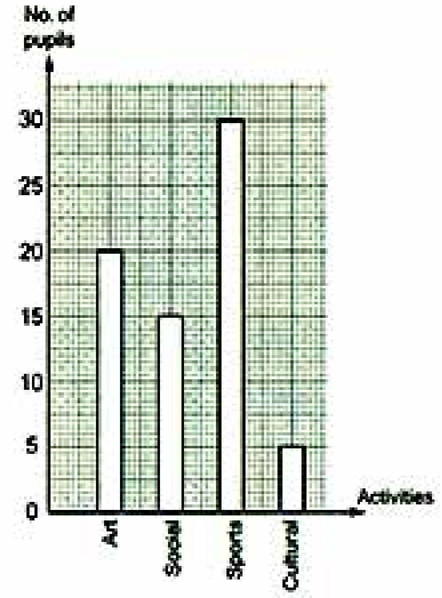


14 Ismailia

1 (1) 4 000 (2) 4 (3) 0.9
(4) 1 (5) 57.34 (6) $\frac{1}{2}$
(7) $\frac{7}{2}$ (8) 14
(9) congruent (10) $\frac{1}{2}$ (11) <
(12) 346 (13) 2.7 (14) 5.65
(15) 134.3 (16) 0

2 (17) 7 (18) 0.4 (19) 0
(20) 10 (21) XY (22) $\frac{8}{11}$

3 (23) The order is : 5.08 , 5.8 , 8.5 and 58
(24) The remainder = 78.5 – 36.25
= 42.25 pounds.
(25) [a] Rectangle [b] 2
(26)



15 Suez

1 (1) $\frac{29}{35}$ (2) 8.8 (3) 51.8
(4) 6 (5) $4\frac{1}{2}$ (6) 29.1
(7) tenths (8) 2 (9) 457
(10) 4 (11) 300 gm. (12) two days
(13) 5.7 (14) an impossible

2 (1) 12 (2) 77 500 (3) 2 000
(4) 0.046 (5) 0.8 (6) 1 000
(7) 750 (8) 36

3 (1) The order is : 0.45 , 0.54 , 4.5 and 5.4

(2) The price of the ball and the book = 9.75 + 5.25 = 15 pounds.

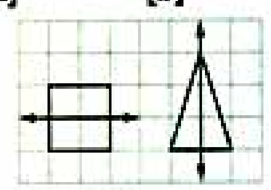
The money left with him = 35 – 15 = 20 pounds.

16 Port Said

1
(1) 3 000 (2) 5 680 (3) 1
(4) 1 000 (5) congruent
(6) 24 (7) 1 (8) 4
(9) $\frac{1}{2}$ (10) 0.07 (11) 0.645
(12) < (13) 3.5 (14) $\frac{3}{5}$
(15) 3.005 (16) $\frac{1}{2}$

2
(1) 9 800 (2) 0 (3) $\frac{3}{3}$, 1
(4) equal (5) 5.25 (6) 1 000

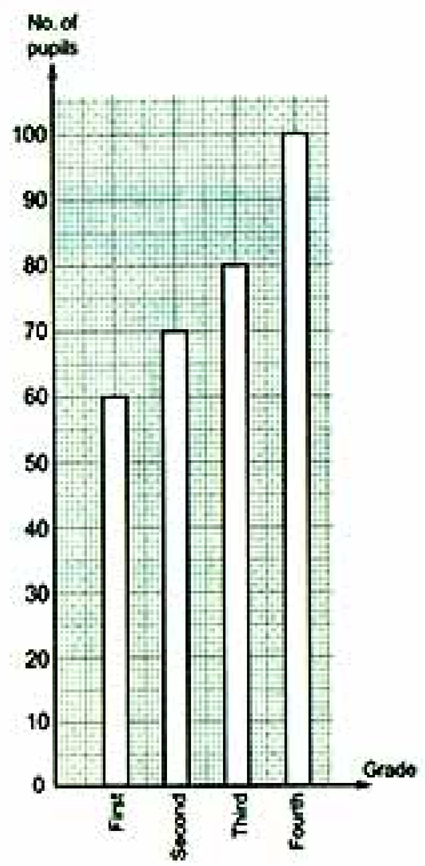
3
(1) [a] 18.11 , 18.1 [b] 46.235 , 46
(2) [a] [b]



(There are other solutions for [a])

(3) The order is : 5.08 , 5.8 , 8.05 and 8.5

(4)



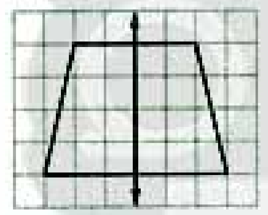
17 Damietta

1
(1) 9.407 (2) 0.03 (3) 2
(4) 0 (5) 0.078 (6) 3 500
(7) $\frac{1}{2}$ (8) < (9) 7.8
(10) congruent (11) 1.3 (12) 1
(13) 3 (14) YZ (15) $\frac{22}{3}$
(16) 2 000

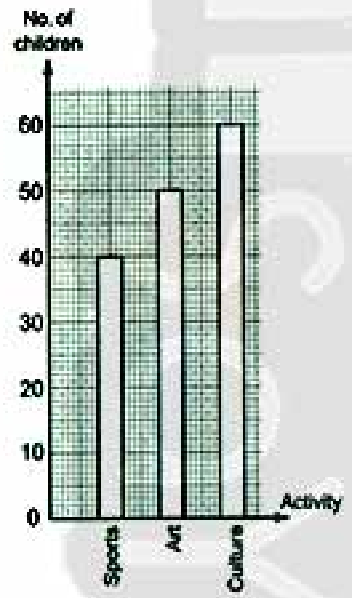
2
(1) 65.08 (2) $\frac{5}{12}$ (3) 20
(4) 180 (5) 31.6 (6) $\frac{1}{2}$

3
(1) He paid = 3.75 + 2.5 = L.E. 6.25
(2) The order is : $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$ and 1
(3) [a] Isosceles trapezium

[b]



(4)



18 Kafr El-Sheikh

1
(1) 0.07 (2) 7.3 (3) 4
(4) 72 (5) $\frac{1}{2}$ (6) 658
(7) Kilometre (8) 430 (9) 5
(10) < (11) > (12) 2
(13) 0.5 (14) 5.35 (15) XZ
(16) 567.5

2
(17) 0 (18) 1.1
(19) 333.5 , 334
(20) 3 (21) $\frac{17}{20}$ (22) 2

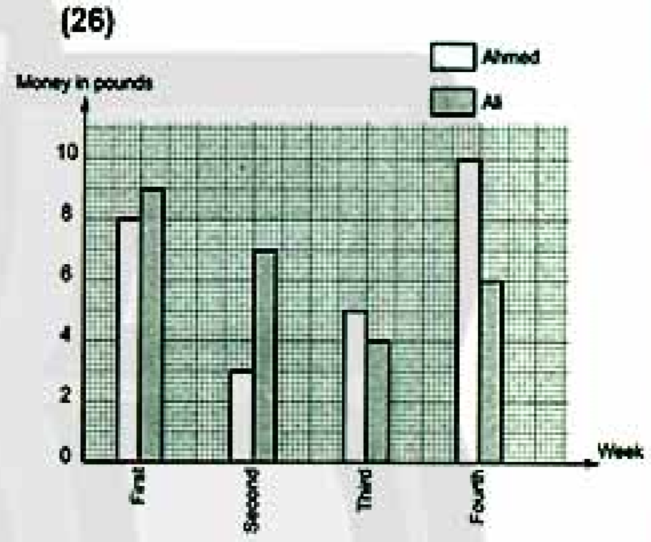
3
(23) What she paid = 34.75 + 26.3 = 61.05 pounds.

The left money = 100 – 61.05 = 38.95 pounds.

(24) [a] $\frac{1}{3}$ [b] $\frac{5}{9}$

(25) The order is : 5.08 , 5.8 , 8.05 and 8.5

(26)



19 El-Fayoum

1
(1) $\frac{1}{4}$ (2) $\frac{1}{2}$ (3) 60.5
(4) $\frac{17}{5}$ (5) 0.17 (6) 2
(7) 0.05 (8) $3\frac{1}{2}$ (9) 1
(10) 0 (11) 10 (12) 760
(13) one (14) $\overline{XL}$ (15) E
(16) <

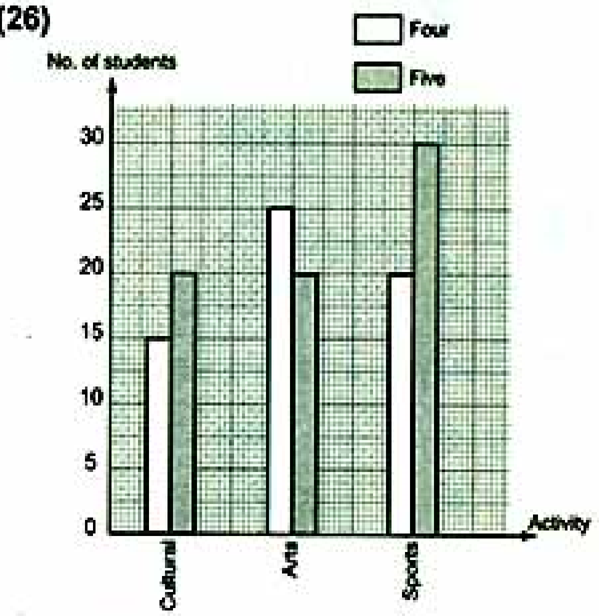
2
(17) sides , angles (18) 3
(19) 8 (20) $\frac{3}{10}$
(21) 17.78 , 18 (22) 22.38 , 22.4

3
(23) The order is : 7.12 , 7.3 , 8.125 , $8\frac{1}{4}$ and $8\frac{1}{2}$

(24) The remainder = 98.5 – 65.25 = 33.25 pounds.

(25) [a] 3 [b] 4 [c] X [d] 13

(26)



20 El-Meina

1
(1) 180 (2) 0.046 (3) 0.645
(4) 4 (5) 9 000 (6) 0.07
(7) $\frac{3}{5}$ (8) 2
(9) congruent (10) $3\frac{2}{5}$ (11) 0
(12) 3 500 (13) 9.7 (14) 567.5
(15) 500 (16) $\frac{1}{2}$

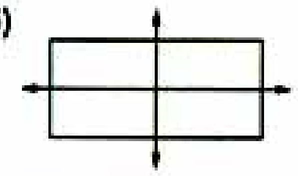
2
(17) a square of side length 5 cm.
(18) 7.6 (19) 49.729 , 50 (20) 3
(21) 0.5 (22) 0.02

3
(23) $\frac{3}{5}$

(24) What he paid = 12.75 + 17.25 = 30 pounds.

The remainder = 35 – 30 = 5 pounds.

(25)



(26) The order is : 5.08 , 5.8 , 8.05 , 8.5 and 58

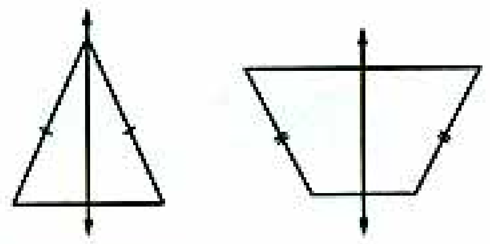
21 Souhag

1
(1) tenths (2) < (3) 624.3
(4) $\frac{4}{5}$ (5) 54.7 (6) 2

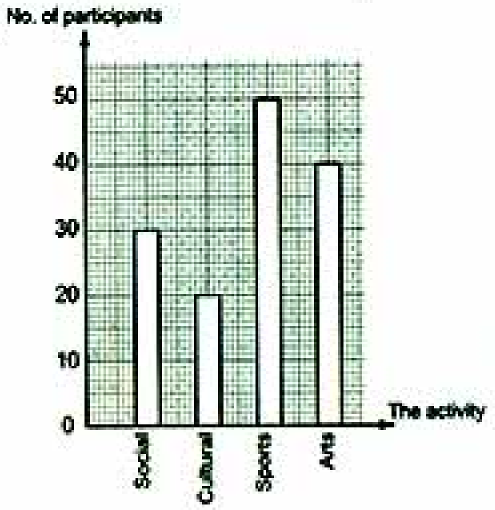
(7) 0 (8) 1
(9) congruent (10) 1 (11) $\frac{1}{2}$
(12) < (13) 6 (14) 6 500
(15) 450 (16) 0.5

2 (1) 1 (2) 14 (3) 4
(4) $\frac{21}{2}$ (5) 6.75 (6) 6

3 (1) He paid = 3.75 + 2.5 = L.E. 6.25
(2) [a] $\frac{1}{3}$ [b] 0
(3) [a] [b]



(4)

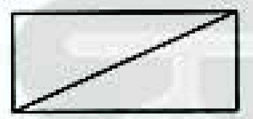


22 Qena

1 (1) 0.07 (2) 1 (3) 72
(4) isosceles triangle (5) $\frac{1}{2}$
(6) 4 (7) 5.2 (8) 658
(9) 3 500 (10) 9.7 (11) hundreds
(12) 70.7 (13) capacity (14) AB
(15) 6 (16) <

2 (1) 381.323 , 381.3 (2) 1
(3) 10 000 (4) 135 (5) $\frac{1}{2}$
(6) triangles

3 (1) [a] Rectangle [b] 2
[c]

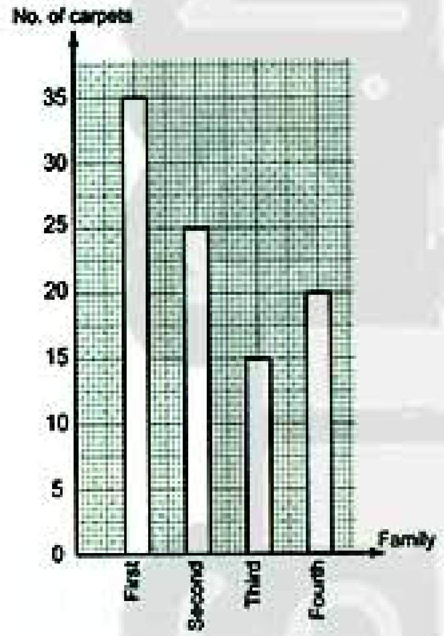


(There are other solutions)

(2) The order is : 5.08 , 5.8 , 8.05 , 8.5 and 58

(3) What she paid = 34.75 + 26.3
= 61.05 pounds.
The money left = 100 – 61.05 = 38.95
≃ 39 pounds.

(4)



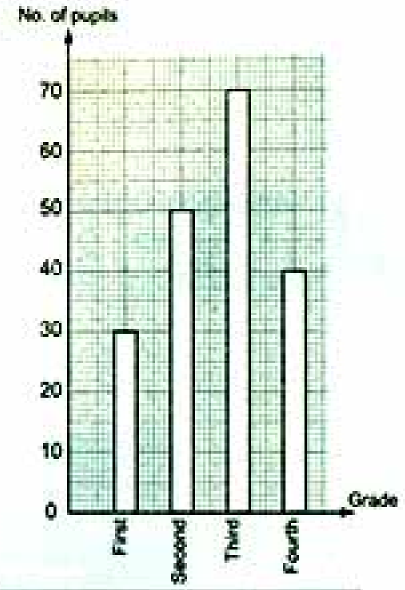
23 Luxor

1 (1) 1 (2) 4 000 (3) 2
(4) 10 (5) 6.3 (6) 7.8

2 (1) 2 (2) 4 (3) 0
(4) 2.111 (5) 5 500
(6) congruent (7) 1 (8) 65 000
(9) 1 (10) $\frac{1}{2}$ (11) 65
(12) 0.645 (13) 7 200 (14) <
(15) 4.14 (16) <

3 (1) The money left = 7.5 – 2.25 = 5.25 pounds.
(2) 40.039 , 40.0
(3) [a] sides [b] angles

(4)



24 Aswan

1 (1) 240 (2) 34.8 (3) 10.4
(4) 1 (5) 4 000 (6) 28
(7) 4.12 (8) 4 (9) 12.6
(10) 3 500 (11) > (12) 3 000
(13) 10 (14) congruent
(15) 11.95 (16) $\frac{1}{4}$

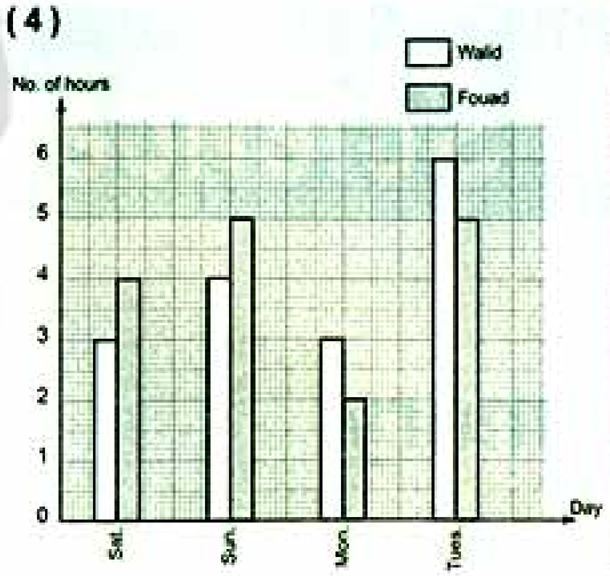
2 (1) 4 000 (2) 2 (3) 69.119
(4) $4\frac{1}{2}$ (5) 72 (6) 0.5

3 (1) The left money = 48.5 – 36.75
= 11.75 pounds.

(2) She paid = 32.25 + 17.55
= 49.8 Pounds.

(3) The order is : 5 litres , 6 500 millilitres , 8 litres and 9 000 millilitres.

(4)

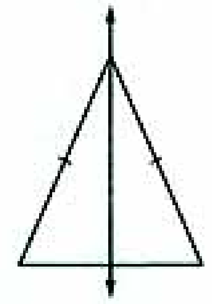


25 South Sinai

1 (1) $\frac{4}{3}$ (2) 4 (3) 1.03
(4) 17 , 18 (5) > (6) 780
(7) decimal numbers (8) 3.3
(9) 0.4 (10) congruent
(11) 4 (12) 5 (13) 2
(14) 52.1 (15) zero (16) 0.4

2 (1) 2 (2) 0.3 (3) 1
(4) angles (5) 1 000 (6) 1 400.3

3 (1) 18.11 , 18
(2) The order is : $\frac{1}{4}$, 0.3 , $\frac{1}{2}$ and 0.8
(3)



(4)